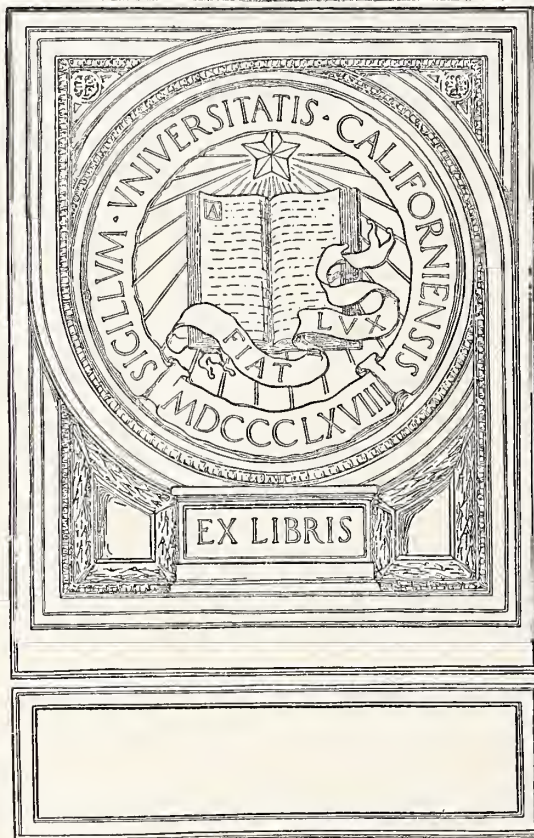


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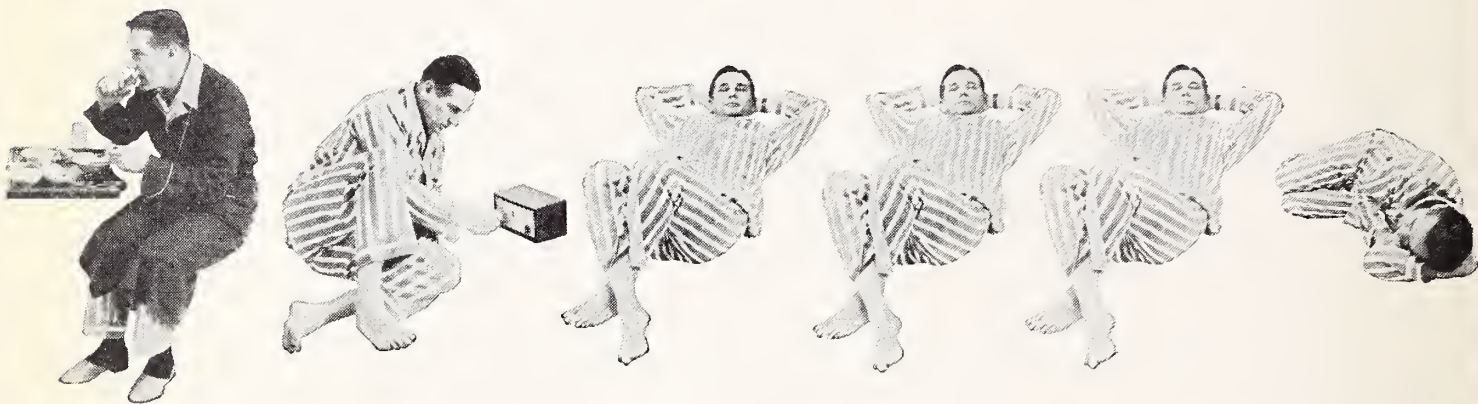


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therapeutic sulfa  levels

Midicel

(sulfamethoxypyridazine, Parke-Davis)

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Trauma And The Search For Objectivity

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OBJECTIVITY AND I

MY prompt acceptance of the gracious invitation of your program chairman, Arnold Wilner, is *objective* evidence of high motivation to be with you at this meeting of NACCA. Private, (subjective), items of information will reveal sources of this drive.

Exposure during a number of years, to difficulties in presenting the extent of disability of the injured person has deepened my understanding of the problems of the claimant attorney. I have been pleased by the increased accuracy of information, courtesies extended to the medical witness in regard to the sparing of time, and other such details revolving around court appearances, as well as the deportment of the person with whom the medical expert appears professionally allied in the adversary proceeding, inevitable in court action. Also, have I been not infrequently disheartened by the poor preparation, lack of thought and careless approach to the medical data and in some, a naive and perhaps unconsciously hostile approach to the *non-objective* by the attorney for the plaintiff.

My emotional tone connotes significant personal identification. Two brothers are attorneys at the

Connecticut Bar, representing the plaintiff, for the most part, in personal injury actions. Could I indeed be unconsciously helping my younger siblings against father authority, represented symbolically by the all powerful insurance carrier?

Lest at a later date I rue these remarks under cross examination, let me remind my fantasized cross examiner, that when unconscious bias is revealed to the self it is thereby rendered impotent

OBJECTIVE INFORMATION IN COMMON SENSE TERMS

Objective information in the context of our discussion refers to what can be demonstrated for all to see. Evidence made public if you will: The visible bruise to the body, the fracture of the skull, the bloody spinal fluid, the cerebral dysrhythmia seen in the electroencephalogram, the cortical atrophy in the pneumoencephalogram. The relative ease of presenting visible evidence has led to a *compulsive search* for this kind of information, to the neglect of injuries in the psychological sphere. The clarification of such injuries requires an understanding of the disturbances which may *not* be seen but which are nonetheless disabling. Such disturbances may be described and presented as evidence by the expert witness who bears the credentials of a "qualified observer".

To enable the lawyer to deal effectively with these concepts in court he must have a clearer knowledge of the impact of contemporary thought

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on the *objective* and the changing notions of what constitutes trauma.

THE OBJECTIVE AND THE SCIENTIST

The physicist deals with the most precise data, yet, if he wishes to be accurate even about a concept of length, he must describe how the measurement was performed. The concept of length is quite different when one uses a ruler, a micrometer, or a beam of light. In addition, temperature, humidity and the skill of the observer must be taken into consideration.

The world of certitude was *severely* jolted by the discovery that—

"As a matter of fact, events are not predictable in the realm of small things. This is practically equivalent to saying that in the realm of small things the law of cause and effect does not operate."¹

In the private world of the atom, particles sometimes behave like waves, and waves like particles. In addition, instruments no matter how delicately introduced to discover what is transpiring in this world, invariably produce *traumatic disturbances* which must be taken into consideration.

"The observer and his instruments become an integral part of the phenomena under investigation. Even in principle, there is no such thing as physical phenomena per se. In all cases, there is an absolutely unavoidable interaction between the observer and the phenomena."²

To cope with such matters, the most *objective* scientist of all, the physicist has introduced the Principle of Uncertainty. In this private world one can well ask—"What is correct?" To quote the physicist again:

"—what is correct, except the 'concensus of qualified observers'?"³

In the private world of man this is equally so.

"The issue is not just whether it is more profitable to emphasize the private or public aspect of science. The issue is the deeper one of the unavoidable dual character of many of the words used in describing what happens to us and our fellows. The words denoting sensation, obviously have this character: 'My pain' and 'your pain'—are evidently different because the experiences are different—"⁴

The distinguished Harvard psychology professor is deeply concerned with the problem of how to convert "private for my neighbor into public for me".⁵

Tonight I shall try to develop with you practical considerations in the clarification of private data as it relates to trauma to the nervous system.

THE NATURE OF TRAUMA

Just as the physicist has learned to cope with the nature of the trauma itself in reaching an understanding of the private world of the atom, contemporary medical scientists and practitioners have broadened the concept of what constitutes trauma in the private world of their patients. Twenty-five years ago, most physicians were concerned only with causes of illness which could be overtly demonstrated. The patient could be struck down by a blow to his head, by an over dose of poison or by the invasion of microorganisms. The causes were known: They could be seen on the surfaces and through lenses of the microscope. Effects were revealed by the blood count, the temperature chart, and the x-ray.

This narrow view of etiology proved insufficient in the understanding of certain patients. We came to appreciate the fact that private thoughts and feelings of the patient could produce gastric ulcers, cardiac arrhythmias, back ache, headache, and even convulsions. Psychic trauma as cause of disease was established. More than fifty years ago, Freud defined psychic trauma as:

"Any impression the nervous system has difficulty dealing with by means of associating thinking or motor reaction."⁶

We have come to learn that the nervous system may carry impulses to various target organs to produce disease of the organ demonstrated by the cardiogram and the electroencephalogram. We have come to learn that external blows are accompanied by psychic blows. We have come to learn that in some instances the psychological strength of the person, the ego strength, will help in the rehabilitation of the structural damage. Also, we have learned that the psychological vulnerability of the person can through no conscious fault of his own augment the organic disability.

SEARCH FOR CLINICAL OBJECTIVITY

Clinicians use a method of science in establishing or rejecting a diagnosis. The doctor has an *educated guess* derived from a careful history concerning what is wrong with his patient. The pertinence of his hypothesis will of course in great part depend on his own interpretive, private skills. This hypothesis is tested by examination, accepted or rejected. If the doctor's hypothesis includes a consideration of the subjective elements of feeling, head pain, dizziness and the like, his *methods* of estimating the subjective complaints must be appropriate to the hypothesis. He can never demonstrate a headache with an x-ray. Nor will he ever be able to reveal memory loss with an electroencephalogram. The compulsive search for "objective

data" may not only be fruitless but damaging to the patient. Introduction of a needle for a myelogram or pneumoencephalogram in certain people "no matter how delicately introduced" may produce traumatic disturbances, recalling events described in the "realm of small things" in the physical world.

For the sake of your claimant, both as a person and client, acquisition of facility in clarifying private data are essential. You must not rely solely on what is overt. As attorney involved in the crisis of court proceedings, dealing with hurt human beings, you must know how to understand what is essentially human. If, in your professional capacity, you were involved with the abstractions of corporate law or the land values in real estate actions you might allow yourself the luxury of the apparent certitude of overtly demonstrable data. It is normal and natural for everyone to wish to be sure. Psychologists say this is a throwback to childhood when father knew all and father was always right. Law coincides with this basic need. In a previous report I put it this way,

"With his rules, his legal fictions and his Supreme Court, the lawyer lives in a world of certitude. The philosophy of law depends upon the logic of a kind of internal inconsistency."⁷

If one uses the concepts of psychological medicine with its own internal consistency and not attempt to force private data directly into a visible mold a significant forward step in the illumination of the evidence of injury will have been made.

Let us examine instances in which private data can be appreciated.

THE EXTREMITY PARALYZED BY BRAIN INJURY

Most plaintiff attorneys are so delighted with the visible evidence of paralysis that they fail to develop equally important information in the world of perception and feeling.

You will have said, "Is it true that injury to this patient's brain and motor area produced paralysis?" You probably would have been satisfied with the answer, "Yes" and with the prognosis that the paralysis would be permanent.

You probably would have overlooked the following considerations which can easily be brought out concerning perception and feeling:

Question:

"Doctor, are there sense organs in muscles?"

Answer:

"Yes.—For example, a cramp in the muscle causes pain."

Question:

"Doctor, can you explain the function of these sense organs?"

Answer:

"Whenever a muscle contracts, sense organs are stimulated by this contraction thereby activating impulses to the central nervous system. By these impulses we know where our extremities are, in fact, that we have extremities at all."

Question:

"What happens to this information, doctor, when the leg is paralyzed?"

Answer:

"Very little information is sent to the brain. What is sent, is distorted."

Question:

"What does this mean?"

Answer:

"It means that due to faulty information the patient has a distorted image of his own body."

Thus, we have been able to demonstrate the mechanisms of the distortion of perception due to impoverished sensory input. No one could quarrel with the validity of this concept, but we can go further.

Question:

"Doctor, because of this kind of distortion of perception, what else happens to the patient?"

Answer:

"A patient who depends on his livelihood for the use of this extremity will often deny the illness altogether and the very existence of the extremity. This is a form of wishful forgetting comparable to what we all do normally to make every day annoyances tolerable. This patient not only cannot move with all its attendant motor disability, but he has a distortion of his own concept of his own body with frightening catastrophic impact effecting unconscious denial of the extremity itself."

It is clear that we dip into the unconscious for most private information. It is this kind of information that I revealed to you when I spoke of my sibling identification in fighting the father, the all powerful insurance carrier.

BRAIN INJURY AND DISTORTION OF PERCEPTION

A distinguished attorney among you presented a patient in Federal Court who exhibited multiple linear fractures of the skull. This demonstrable

evidence was dramatic and presumably sufficient for the purpose. In addition, the patient presented complaints of dizziness, some difficulty in hearing and smelling, but he was chiefly concerned with the fact that he could not work on a scaffold. It might have been adequate to present the picture as a Post Cerebral Contusion State associated with multiple skull fractures. Yet, not to have explored the private data would have deprived the jury of valuable information on which to form an opinion. This distortion of the patient's world of perception was brought out fruitfully:

Question:

"Doctor, you stated that the fractures of the frontal area were in the anatomical position to injure his sense of smell and you stated that this is permanent. Doctor, what does this mean exactly?"

Answer:

"It means that the whole world of odors is permanently denied this man: The flower, the perfume and the food he savors. In other words, because of the lack of information from the outside world these perceptions are impoverished and distorted."

Question:

"Doctor, you testified that this patient has double vision intermittently because of involvement of extra ocular nerves. What does this mean to the patient?"

Answer:

"It means that the patient's brain must constantly correct for distorted information given him by his own sense organs. This must interfere with his reading and cut down his visual world. Strain and tension headache appear."

Similar discussions have brought out the mechanism of vertigo in this man.

Again we have entered the private world of the patient via the bridge of the nervous system and the understanding of perceptive mechanisms.

BRAIN DAMAGE AND THE "PERSONALITY CHANGES"

Let us suppose that we are presenting a patient who has sustained a laceration of the frontal lobes of the brain. What has really happened to that patient? He goes through a period of unconsciousness; he has a period of confusion, of irritability, disorientation and memory loss. All of these symptoms and signs are psychological manifestations of objective evidence of brain damage as judged, for example, by the appearance of blood in the spinal fluid. In your development of this case, no one

would think of omitting these psychological data, brought out by the patient with the help of the trained observer.

Let us go a little further. Suppose this patient to be a teacher whose concern with cerebral activity is far reaching. Brain Tissue ultimately healed with scarring. Has he healed psychologically? No, he may become seriously depressed, since he is unconsciously aware that a catastrophe has befallen him. This catastrophe is so great that he may not allow its full impact to reach consciousness. Denial mechanism is reinforced by a kind of whistling in the dark. He becomes slap happy (euphoric): He covers up memory losses by recalling episodes that did not happen (pseudoreminiscence): He tries to divert you in any conversation which will force him to reveal his inadequacies to himself and to you. These private data can be demonstrated convincingly as correct on the basis of "consensus of qualified observers". Such mechanisms have been intensively studied in numerous patients by trained observers during the past fifty years.

HEAD INJURY IN A SIX YEAR OLD CHILD

A child examined 2 years after a cerebral injury may reveal no overt disability in the realm of the cranial nerves, motor or sensory systems, or reflex behavior. Aphasia, may have disappeared, since children compensate well in the "mind" sphere for damage to "brain".

Yet, the child's academic school record may have suffered. He exhibits temper tantrums and other behavior disturbances in play with contemporaries, not noted prior to injury. These overt data may be validated by school records and similar documents. Such "public" items of behavior enlarge the evidence upon which an expert medical witness can make a clinical appraisal. They reduce the effectiveness of the question,

"Doctor, in judging the effects of the injury, you relied on what the patient or parent told you?"

One may also expect in cross examination the question,

"Doctor, you did not know this child prior to his injury?"

Since the specialist rarely has seen a patient prior to accidental injury the inevitable negative answer must be dealt with. In the realm of behavioral disturbances specialists have acquired concepts and skills requisite in the estimation of the pre-morbid personality. The "qualified" observer may "extrapolate" to such an appraisal. Supportive data may be secured from the Clinical Psychologist. Psychometric tests afford useful information concerning the structure of the personality prior to injury as

well as contemporary findings resulting from injury to "Brain" and "Mind".

HOSTILITY AND THE WHIPLASH INJURY

The whiplash injury is a blow from behind. An innocent person is struck through no fault of his own. Let me remind you that anger is justifiable under such circumstances and when repressed, may produce pain and headache. The whiplash injury, jarring the head on the neck, can produce distortions of body mechanics so that the physiology of nerve roots is seriously disturbed. Nerve roots carry sensory impulses to the brain and motor impulses from the brain. The patient develops a Traumatic Cervical Radiculitis with pain in the neck and shoulder. Muscle spasm occurs involving diffuse cervical, deltoid, and scalenus areas. This is nature's way of splinting an injured structure. Tension and anxiety will augment this splinting mechanism. An angry person gets "a pain in the neck" from repressed anger of the unwarranted blow from behind as he was innocently parked awaiting a left turn. A severely contracting muscle is a painful one and reinforces the pain pathology described. Pain itself becomes a disease.

It is feasible by describing mechanisms of such injuries to make public the private world of pain.

SUFFERING, CAUSALGIC STATE, AND THE PHANTOM LIMB

Let me quote from a previous paper presented to Beaver County Bar Association which may be useful.

"Consider the young girl who receives a blow to her forearm from a falling bolt of cloth in a department store. The ensuing pain to the wrist is treated very casually at first by the 'company doctor', always suspect by certain patients. The patient is given a 'pep' talk and told there is nothing wrong with her. She goes home with pain and visits—the family physician who may inject novocaine into the joint. This tends to aggravate the pain cycle."⁸

Thus far symptoms are essentially all private, but as the pain persists sympathetic nerves which control blood vessels over-react, blood supply is reduced to the extremity, atrophy of the hand occurs, and porosis of the bones appears in x-ray. The pain has drawn into its orbit, more and more components of the sympathetic nervous system sensitized by extreme emotional fragility. In demonstrating the pain mechanisms, often, the nature of the activity of the autonomic nervous system associated with emotional behavior, may be a fruitful source of questioning.

SUFFERING AND THE PHANTOM LIMB

A competent attorney for the plaintiff presented a patient with multiple body injuries which left minimal visible disability, except for an amputation of the left arm above the elbow. The extent of his disability in relation to the extremity was considered only in terms of his capacity to return to work at previous employment as truck driver. It is well known to you, of course, that capacity for work is used quantitatively as an estimate of disability in compensation court. It is also sometimes used by the defense as a way of judging recoverable damages. Recently I was asked if my opinion would change if I knew a certain photographer had earned \$5,600 during the year when he was supposed to be suffering pain. I said that it could alter my opinion only if I knew whether or not the job demands were kept constant. In other words, any job can be downgraded by a friendly employer to become part of a rehabilitation device. It would thus not represent the job dimensions in open competitive market.

What a man must overcome in terms of pain and suffering in the performance of a job, should be clarified and presented. We must not penalize a man whose psychological structure is strong enough to pay this price. The man with an arm amputation would be able to return to previous employment, although perhaps not driving a truck; but there are other considerations.

Every person with an amputation has suffered a psychological blow. The extent of that loss will be determined by the kind of person he is. Almost all have phantom limb experiences, which probably means, that the loss is so serious and catastrophic, that they deny the loss altogether, by mechanisms previously described. They may even experience phantom limb *pain*, interpreted by some, as a psychotic symptom. Such suffering frequently produces drug addiction, insomnia, weight loss and other overt manifestations of suffering. Such suffering is frequently overlooked by the plaintiff because it smacks of the subjective, the neurotic and the non-demonstrable.

DOCTORS AND OBJECTIVITY

In a previous communication I pointed out:

"Unconscious bias is a human frailty. Doctors are no exceptions. A family physician, caring for an injured head of a household may have deep emotional attachments to the person and family."⁹

A surgeon who operates on such patients may also have such attachments. When financial considerations are involved very few doctors would consider forcing payment in such instances. The problem of the *contingency fee* for diagnosis and treat-

ment in such instances has been clearly stated by a distinguished psychiatrist referred to in a previous communication:

"Some physicians frown on the acceptance of cases on a 'contingent fee basis', because it gives the doctor an emotional investment in winning the case. However, it is a principle of medical ethics that the indigent always have a doctor for his free services—if all—in a community were to refuse 'contingent fee cases' the net result would be that a poor person who suffered injury would have no redress, because he would be unable to obtain medical evidence to support his claim."¹⁰

As I have previously stated, he may not have any doctor at all. In fulfilling his duties as a physician, the doctor protects the patient not only from his illnesses, but from premature and unfair settlement. The doctor can reduce the patient's anxiety by taking care of him in this manner, thereby mitigating his suffering.

An item of a financial nature, which is important to expert medical witness and attorney must be clarified. It is clear to all of you that, should it be the intention of the plaintiff attorney to ask one hypothetical question, a question involving opinion, the doctor, perforce, must have been established as an expert. It is the immediate responsibility of the attorney to compensate the expert medical witness for his time. This must *not* be on a contingency basis. The court has said:

"The litigant has no more right to compel a citizen to give up the product of his brain than he has to compel giving up of material things."¹¹

Unlike the cost and care of an indigent patient who may have been referred through legal and medical channels the fee *cannot* depend on the outcome of the case. The court has stated on multiple occasions:

"A contract to pay a witness for testifying coupled with the condition that the right to compensation depends on the result of this suit is contrary to public policy."¹²

SUGGESTIONS TO THE PLAINTIFF ATTORNEY

1. Pre-Trial Conference:

Let me quote from a publication of Theodore I. Koskoff, distinguished Connecticut attorney:

"It is an elementary principle of trial practice, that a lawyer offering testimony on behalf of his client should thoroughly discuss the case with the witness whose testimony he is offering. This is particularly important in the case of a medical witness. If the lawyer fails

to initiate discussions before trial of the subject matter of the medical witness' testimony, then the medical witness himself should insist that the proper presentation of his testimony requires a discussion. The costs of such conference prior to trial are, and properly should be, an element of the fee which the medical witness should receive for his appearance in court. The popular conception that there "is something wrong" with a medical witness discussing the case with the lawyer who calls him before trial, and that the witness is in a sense the friend of the court, is sheer nonsense. It is not only proper but necessary for him to discuss the case with the lawyer for an honest, intelligent presentation of the facts. The failure to do so is poor practice on the part of both the doctor and the lawyer. It is out of this pretrial discussion between doctor and lawyer—that an agreement can be reached as to the manner and scope of presenting the evidence in court."¹³

I consider it unfair to be asked to appear in court without such pretrial conference. Unfair to the patient, client, to the jury, to the court. Pointless, meaningless questions are confusing and time wasting. To ask an expert, by telephone, during a recess in a trial, what he thinks a few minutes before he is to appear is an indignity. If one is to deal with the mechanisms of pain and suffering and the validation of such private data pretrial conference would be imperative.

2. Courtesy to the medical witness would involve no "quicky" referrals just prior to litigation. The expert must have time, preferably over many weeks to study the patient. It is not enough to write a letter saying, "Your bill will be protected" nor is it sufficient, although courteous to indicate that when you get to the trial, "we will take you out of turn". It is more important to treat the medical witness, who is an expert, with the consideration born out of respect for his probity and skill, in handling the problems of the patient-client.

The discussion in relation to the public and private data which I have developed with you was not intended as a primer on "how to win cases and influence juries". Its purpose was to stimulate you to deal more fully with subjective experience within yourself and your client. If you do not acquire these skills and the energy and imagination to apply them, you must not blame the doctor or anyone else because the facts were not demonstrated. It is not easy to be an informed and effective claimant and compensation attorney, but the rewards are more than financial in terms of personal achievement in an important, responsible task, well done.

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Heart Disease Used As Anxiety Defense

For some persons to face life, they may need to believe they have heart disease even when it has been proved they do not, three eastern physicians have said.

Their conviction may represent a necessary defense against "potentially overwhelming anxiety," the doctors said in the current Journal of the American Medical Association.

They made a six-year study of 52 persons with chest pain. Of these 27 were classified as having a "cardiac neurosis," in which they showed no evidence of heart disease but were convinced of its presence.

Twenty-five had angina pectoris, a disease marked by paroxysmal chest pain with a feeling of suffocation and impending death. Caused by an oxygen shortage in the heart, angina pectoris is usually precipitated by effort or excitement.

The 27 patients who believed they had heart disease were "all intensely anxious people whose neurotic behavior was readily apparent," the doctors said. They tended to dramatize their symptoms and often referred to their "heart pain." Some of them were totally incapacitated, while others were able to lead an active and constructive life in spite of their symptoms.

They showed "a high degree of secondary gain" from their ailment, the doctors said. In some, the pain represented a means for setting limits to their activities and freed them temporarily from intense pressures or responsibilities. It seemed to act as a means of getting attention and of controlling family members. In others, the pain represented an acceptable "excuse" for failing to attain certain objectives. For some, there was a definite monetary compensation from their pain. If their compensation or need for invalidism was questioned, they became angry and defensive, the doctors noted.

"Once an individual has allowed himself to regress to this stage of dependency," the doctors continued, "it is difficult or impossible for him to relinquish this way of life even though the diagnosis of heart disease has been disproved.

"Their eventual incapacity equals the most serious types of heart disease. Sudden withdrawal of long-continued compensation may be disastrous. It seems highly probable that the conviction they have heart disease may be essential for the functioning of some patients in life at certain times."

Under these circumstances it is often advisable to allow the patient to maintain his cardiac neurosis, they said. However, physicians should do all they can in helping such patients overcome their fears by understanding the underlying sources of the patient's anxiety and his conflicts.

Other points the study showed were:

The average number of doctors consulted by each patient in the cardiac neurosis group was 4.7 compared to only 1.5 for each patient with angina pectoris. It was not unusual for the neurotic patients to be consulting a number of physicians simultaneously.

The onset of chest pain in every patient with cardiac neurosis was preceded by increasing emotional tension and was often associated with deterioration in their life situations.

Some of the patients with angina pectoris had cardiac neuroses as severe as the members of the other group. These patients were very anxious, which increased the frequency and severity of the anginal attack. They became "overtly terrified and behaved as though any physical or emotional strain was too great for them. They seemed to have 'wrapped themselves in cotton wool.'" However, most overcame their fears and learned to live within newly imposed limits.

The Future Of Radiation In Medicine

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DR. Snoke, Dean Lippard, President Griswold, Mr. and Mrs. Hunter, distinguished guests, friends and colleagues, as a Yale graduate both of Sheff and this Medical School I am deeply sensible of the privilege and honor of participating in these exercises today. This morning I had the opportunity of inspecting the new Hunter Radiation Therapy Unit of the Grace-New Haven Community Hospital and the Yale Medical Center. It is magnificently planned and makes provision for greatly needed expanded facilities in radiation. It is meet and proper that it physically is located near the center of the Yale Medical Center for it increasingly will become sought out by all branches of medicine for the special services there offered.

Medicine as a profession has always incorporated into its own domain, in its own way, useful and significant advances in other fields. It has shown no favorites, for tenets of social behavior as revealed by historical study were seized as rapidly as scientific advances which had immediate and profound effects on the daily practice of medicine as it affected the average individual. We are wont today to marvel at the rapidity with which the profession adopted the sulfa drugs and penicillin in contrast to its reluctance to accept some of the more basic bacteriological tenets at the turn of the century. Even as the germ theory of disease was being hotly debated by proponents and opponents, in another field without hesitation an advance was accepted and incorporated as rapidly as possible. I refer, of course, to the development of X-ray by Wilhelm Roentgen, a professor of physics. Incidentally, Roentgen also studied under Clausius who taught our own Willard Gibbs at Zurich. Roentgen reported his work on December 28, 1895 and in 1896 it already was being applied to therapeutic ends as well as diagnostic uses. It is of interest that even then the application of this new knowledge of physics led to arguments on its morality in the public press though the arguments were decidedly different in nearly all respects from those we now encounter daily. Three years after Roentgen's discovery the Curies, who were chemists, reported their discovery of radium. The essential ingredients for the medical specialty of radiology were now at hand.

It is, I believe, significant that modern medicine has always promptly adopted new concepts developed in physics and has generally, within a shorter or longer period, also in some way adapted to its own uses the devices which were instrumental in confirming or permitting the discoveries in physics. The use of the X-ray tube was, of course, immediate. During the next thirty-five years we saw the development of the specialty of radiology. Diagnostically, it became an important adjunct to the surgeon's examination. For the orthopedist, X-ray examination became practically mandatory while the internist and pediatrician found increasing need for consultation with their radiological colleagues. Deep therapy with X-ray was originated by Perthes in 1903 who was a prime mover of the treatment of cancer by irradiation. This grew concomitantly with diagnostic radiology. Because of the enormous breadth of medical knowledge required to encompass the fields both of therapy and diagnosis utilizing X-ray, there developed a practice for men to specialize either in one or the other. Although radiology grew to full stature as a medical specialty, it retained all the characteristics of a specialty. That is, many of the fundamental facts of radiology were not used by non-radiologically trained physicians and surgeons who saw no need to increase the already large demands for knowledge required by their chosen fields. Thus the effects of radiation were essentially only the concern of those using X-ray machines. During the thirty-five years to 1930 a great deal of very important basic information was obtained. The capacity of X-ray to retard, kill or conversely induce malignancies was studied. Its effects on temporary suppression of gonadal activity and immune mechanisms were documented. Increasing pains were taken to design machines for specific tasks so these could be done with decreasing hazard to both operator and patient. Phenomenal advances were made in X-ray treatment of cancer—advances which were large because some control was achieved where previously no effective control existed. Yet the basic problem of complete cancer control remained elusively beyond the radiologist's grasp.

When Dean Lippard and I studied physics in the Sheffield Scientific School in the late 1920's this

science seemed to have become stabilized. Only a few matters remained to be solved. I well remember Professor Saxton's remark in a course on thermodynamics that evidence for the equation $E = Mc^2$ could be obtained "only by astronomic observations of explosions of distant novae." It was not deemed capable of experimental proof in the laboratory. Then in the early 1930's Professor, and later Nobel Laureate, Ernest O. Lawrence, who obtained his Ph.D. at Yale, developed an idea while on the Yale faculty for a device to study better the structure of atomic nuclei. California called him to its faculty so it was on the West Coast that the Cyclotron was born and with it a new era in physics, to be followed, as we shall see, by a new era in medicine. Within a very few years after the development of the Cyclotron, its capacity to make elements radioactive was seen to have profound medical implications. Dr. John H. Lawrence, Ernest's brother, who had received most of his specialty training in internal medicine under Professor Francis G. Blake here at Yale, was among the first to use for medical purposes a radioactive isotope, radioactive sodium, prepared in the Cyclotron, and to use another Cyclotron produced radioactive isotope, phosphorus 32, in treatment of leukemia. Then iodine came into prominence for thyroid gland testing and later therapy of hyperthyroidism. From these first halting steps the present extensive and widespread use of radioactive isotopes in medicine has sprung. Thus, once again we see the cycle repeating itself of a basic discovery in physics being promptly seized upon by alert members of the medical profession who utilized the new knowledge to advance man one step further in his constant battle with disease and his effort to attain and maintain a state of health during the entire life span.

In the 1940-1950 decade tremendous changes occurred. From the first sustained nuclear chain reaction at Stagg Field to the present giant nuclear reactors is an enormous step. The development of the atomic age has been explosive in character. Whereas previously only a few milligrams at most, or micrograms usually, of radioactive isotope could be prepared, now pounds and literally tons could be made if desired. The implications of this advance were not lost upon medical scientists and after the war many scientists in a number of laboratories were seeking training that in their own researches they might gain advantages accruing through use of radioactive isotopes. The immediate postwar period saw Yale again in the forefront since Yale is one of the nine universities concerned in the group organization of the corporate entity, Associated Universities, Inc. This provides a university operated structure wherein scientists of all disciplines can further investigate nuclear physics phenomena in

relation to their own discipline. Associated Universities through its operation of Brookhaven National Laboratory thus provided to the academic world, large facilities for joint use by all scientists. At the same time the University was strengthening its Department of Physics with new and complex devices which as we shall see later are not unrelated to machines currently installed in this therapeutic Medical Center. Nuclear physics seemed to be overflowing all its accepted scientific boundaries, and former clear distinctions between physicist and chemist, between theoretician and experimenter became decidedly blurred. Knowledge again was asserting itself as being an indivisible whole. It could be gained through many doorways but each passage ultimately lead to the same fundamental question, however different might appear the terms in which it was couched.

Radioactive isotopes seemed on one hand to be the particular province of the physicist, on another, that of the chemist and on yet another plane, that of the physician since their capacity both to provoke and control disease was known. During the latter years of the decade 1940-1950 this field of knowledge though obviously multiplex, yet seemed contained within the usual and familiar disciplines albeit with an unusual amount of intermingling. The demonstration that reactors could be used for power, that radioactive isotopes had numerous exceedingly useful applications in many industries and that fearsome weapons of exceedingly great radioactivity could threaten man, suddenly changed the environment in which the physician found himself. The one hundred nuclear reactors presently built or under construction in the United States alone are but a token of things to come.

Whereas up to this time radiology was a quiet specialty impinging on many aspects of medical practice, it generally provided alternative rather than exclusive procedures, interpretations or knowledge. The revolution in medicine wrought by the sulfa drugs and antibiotics was an experience limited to the medical field. While these advances had immediate significance for those with certain infectious diseases, they held only a potentiality for the average citizen in the event he should acquire one of these illnesses. Suddenly it was born in upon man's consciousness that in this last development of nuclear physics, medical facts and interpretations were not a nicety to be obtained at will, but a vital necessity for survival. Whereas previously radiation effects were of concern only to the small number of persons for whom diagnostic and therapeutic radiologic procedures were necessary, now man found that without his volition he ran exposure risks which were inescapable and under some circumstances might become annihilating. The need for

interpretative facts on radiation exposure has been recognized by all members of the medical profession and with a unanimity seldom seen in this diverse group all are intent upon gaining the necessary answers. This widespread change in, or threat to every man's environmental sanctuary has radically changed the position of radiation in medicine.

At the same time in an entirely different direction a revolution was occurring in medicine. The use of radioactive nuclides as tracer materials provided a means of obtaining information regarding utilization, metabolic pathways, incorporation, degradation and excretion of compounds which it was impossible to gather by any other means. Biochemists, physiologists, internists, surgeons, and members of all the subspecialties of medicine realized that with proper procedure, tests could readily be performed of incalculable value in the solution of both specific and general problems of disease. For the first time man could with proper instrumentation literally peer within the cell of an intact mammalian organism and observe what was transpiring therein. The stream of articles to medical journals started as a trickle and now is a flood attesting to the usefulness of these products of the atomic age in medicine.

Thus both from within and without medicine there developed simultaneously an explosive increase in use of radiation sources. The medical interpretation of radiation effects suddenly changed from an academic question to be argued by skilled scientists, to a political determinant with possibly world peace depending upon correctness of decision. Political decisions of all sorts had to be made ranging from those resulting in organization of our atomic energy commission and the provision of radioactive isotopes to all our scientists in consonance with our philosophy, that restriction begets only mediocrity to complex decisions on world affairs which might in part be kept within a suitable environment by commitment to special committees of the United Nations. The various news stories in the press of the world regarding our present hazards are too well known to all of you to require my detailing of them here. Man has now the capacity to create an environment, perhaps unwittingly, which might be capable of exterminating the human race. The question "How much radiation is safe?" is no longer academic. It is immediate. It is pressing. It is intensely personal for all thinking individuals. To answer this the great universities of the world are making available to their scholars instruments and devices of a complexity and cost previously undreamed of.

One other set of circumstances I wish to bring to your attention. This is the changing composition of our population in the United States. In 1900 with

a very much smaller total population, there was about four per cent of our total people aged 65 years and over. In 1955 there was a doubling of the percentage of persons in this age group to 8.5 per cent. In actual numbers this represented not a doubling but almost a fourfold gain—from 3.5 million to 12 million. By 1975 it is estimated that this segment of our population will further increase both percentage wise and in numbers—the latter to over 21 million. These facts have great significance for medicine. In the first instance more people are living their allotted life span than ever before in history. The effective control of the great plagues has radically changed the nature of illness from which people now suffer. In 1901 but 46 per cent of deaths in the United States was caused by chronic disease whereas in 1955 this percentage had risen to just over 81. About one-fourth of these are from cancer. Now mind you, these are deaths—these statistics do not show the increasing number of people who have been cured of cancer so its relative importance is even greater than these figures show. Thus with increasing age there goes, at this time hand in hand, an increasing incidence of cancer in general. This decreases somewhat in the older age groups. Each type of cancer shows a more or less characteristic distribution. With more people in the so-called cancer age group we may expect to see more disease of this type. Indeed, this is precisely our experience. Consequently, it is necessary for us to mobilize all our resources to bring this scourge under more effective control. Surgery has been exploited to the utmost and, fortunately, in many circumstances it is a very effective countermeasure. However, there remain many types of malignant disease for which we have as yet not developed effective therapy. Two main avenues of approach show promise today. One of these is chemotherapy and the other is radiation. As I mentioned early, radiation therapy of cancer was vigorously promoted by Perthes over 55 years ago. The advances in external radiation therapeutic control of cancer have, during this interval, been dependent largely upon engineering advances in construction of X-ray tubes. The development of the linear accelerator and Cyclotrons by physicists has brought us another step forward in our capacity to deliver destructive radiation deep within the body without significant harm occurring to the surface and intermediate structures through which the beam must pass. In this new Center some of the latest types of therapeutic radiation devices are made available for this fight against cancer. In addition to fixed sources of radiation external to the body like X-ray machines, Van de Graaf machines and betatrons, the radioactive isotope is finding use for internal administration. It is given internally locally in

containers as has been the practice with radium for years and internally systemically when specific metabolic pathways sequester the radioactive element largely in malignant tissues as occurs with some types of cancer of the thyroid. In part intermediate between these two approaches, at Brookhaven, I have for some years been engaged in utilizing in a preliminary and exploratory fashion a nuclear reactor itself. For by loading a malignant structure, in this instance a highly invasive brain tumor, with a specific kind of element, in this instance boron of mass 10, and then subjecting the region to a bath of thermal neutrons, radioactive reactions can be generated in the target element already located in the tumor in the same fashion as other radioactive elements are made in the reactor core. In this instance, the atomic disintegration is immediate and final and of such force that it is capable of destruction of the cancer cell and yet that force is entirely spent within the cancerous tissue. This procedure which we have termed neutron capture therapy has thus far been limited in its testing to one disease, a brain tumor, glioblastoma multiforme. In other situations radioactive elements are finding usefulness in demarcating malignant structures that the beams from powerful machines may be properly aimed to achieve their objective. At the University of California an accelerator is used to excite heavy particles which then can be directed deep within the head to destroy the pituitary. Pituitary removal by any means whatever seems at least temporarily to inhibit growth of cancer in some fashion not yet clearly understood.

Thus it can be seen that although our population in the cancer age group is increasing and in some instances as with cancer of the lung increases are alarming, on many fronts there is already existing exploratory probing into new, better and more effective methods of control. In many instances, these are dependent in one way or another upon subjection of the malignant tissue to radiation either internally or externally applied. Today, as never before, there are at hand procedures for cancer control not previously available. If one carefully studies the statistics of cancer, these devices are seen to be not without significant effect though

it is a practice in medicine to dwell on failures rather than successes. Thus our inability to control lung cancer is widely discussed while the favorable trends in treatment of uterine cervix cancer tend to go unmarked.

Last, I wish to point out that radioactive isotopes, particularly those with a short radiological half life with decay into stable elements, will undoubtedly play an increasing role in diagnosis of disease, evaluation of therapeutic regimens and establishment of positive health criteria. This development is without doubt inevitable.

I think it is clear at this point that I have perhaps misled you by the title of this lecture. It takes one with much greater clairvoyance than I possess to predict the future of radiation. On the other hand, I hope that I have made clear an assessment of the importance of a knowledge of radiation. Instead of occupying a place on the periphery of medicine, radiation has become a part of the central core of knowledge on which many medical decisions must be based by all practitioners and researchers regardless of their field of specialization. Further it is clear that these medical interpretations to be of value can be made today or arrived at in the future only when there exists a close intermingling of *men* in physics, chemistry, and other sciences with medical scientists for neither the physical scientist nor the physician alone can arrive at the fateful decisions which must be made. The interpretations upon which medicine can build again will be central to decisions which must be made by business men and engineers, legislators and statesmen, officials and otherwise undesignated citizens. On these decisions our whole way of life in the future may depend. That Yale University will bring to bear upon the solution of these questions all its resources in brilliant scholars is eloquently testified by these exercises today. To broad humanitarian goals, wherein science and the humanities wedded as they are in part in medicine, the men are dedicated who now and in the future will staff this institution. To them belongs the future. I know it will be worthy of Yale and of the rich humanitarian tradition of the Grace-New Haven Community Hospital.

The Irritable Bowel

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INTRODUCTION

THE irritable bowel syndrome is so common that it tends to be neglected; ill-defined, obscure abdominal pain is labeled "irritable bowel" and forgotten. It must be remembered, however, that in disorders of the bowel, function and structure can often be correlated with symptoms. A more precise recognition of the "spastic colon" or irritable bowel syndrome would lead to a reduction in needless operations for abdominal pain and to alleviation of many symptoms which are now classified by most internists as neurotic. This is not to deny the partial functional origin of such difficulties, but is to emphasize, rather, the general therapeutic and diagnostic plan.

Only when the patient's abdominal complaints coincide with known motility patterns of the bowel, so that symptoms may be related to function, does the irritable bowel become an entity amenable to rational therapy. It is important, therefore, not to include all vague abdominal pain in the category of the irritable bowel. Hysterical pain, for example, is not amenable to therapy directed at colonic dysfunction. One must keep in mind the difference between hysterical conversion symptoms and psychophysiologic events: hysteria is symbolic and involves the acting out of some part of a specific emotional conflict by means of sensory systems and voluntary musculature; the hysterical mechanism does not influence smooth muscle. Internal organ function, then, becomes affected only at the points where musculature is mixed or striated.

Psychophysiologic disturbances may disrupt smooth muscle physiology.¹ They are best seen as a concomitant to an intense emotional state; they tend to turn on and off with that emotional state, but because of the physiological disruption or damage that they produce, the symptoms may last longer than the period of stress.

PHYSIOLOGY

Peristalsis, segmentation, kneading, and swaying pendular movements are characteristic of small intestinal motility; pressure recordings have shown that these same movements occur in the colon.²

Simple small rhythmical ripples (Type I waves) last only a few seconds and develop minimal pressure; they occur about 6-12 per minute. Firmer contractions (Type II waves) at a rate of 2 per minute produce the haustrations and annular colonic contraction rings; such segments thoroughly mix colonic contents without propelling them forward. More complex (Type III) waves are slow, sluggish, last 4-5 minutes; they rise and fall with no discernible utility. Finally, the massive *Type IV* waves shorten the bowel, wipe out all other activity, and convert the descending colon into a short tubular structure; these are the well-coordinated and highly propulsive mass movements of defecation.

It is the powerful but static Type II and the propulsive Type IV contractions that provide a possible theoretical physiologic background for the irritable bowel symptoms. Relaxation must precede contraction for orderly progression in the intestine. Any disturbance to such progress will produce symptoms. The stimulus may be "organic," as a carcinoma or an area of diverticulitis, it may be a general heightening of colonic tone, as the individual's response to environmental stress as in "examination anxiety" or it may be inflammation of the mucosa and sub-mucosa as in ulcerative colitis. Regardless of the cause, orderly progress is upset, leading to disordered bowel function, to an awareness of peristaltic waves, and to cramping pain and diarrhea.

Almy³ has made a good start in correlating bowel waves with symptoms; he finds very little pelvic colonic motility in normal people at rest; a stressful interview markedly stimulates intestinal motility. Patients with the irritable bowel, in contrast, have continuous pelvic colonic motility with complex Type III waves. Here, therefore, is some evidence for a heightened response to stress, in addition to disordered motility, in the irritable bowel syndrome.

These points deserve emphasis because of the tendency to call any unexplained abdominal pain "irritable bowel". It must be repeated that pain which cannot be related to bowel function is not the "irritable bowel"; the physiologic background yields the key to diagnostic and therapeutic success. These symptoms and mechanisms constitute a *FUNCTIONAL* abnormality however, and make no implication as to the etiology of the syndrome. Only

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when *all* causes for such dysfunction have been excluded may the irritable bowel syndrome be accepted as a primary clinical entity.

CLINICAL PICTURE

Symptoms in the irritable bowel syndrome arise from a neuromuscular disturbance of the colon, and there may be similar spasm in the stomach, the small intestine, or the gallbladder. The classical triad of symptoms comprise constipation, diarrhea, and abdominal cramps—the constipation is persistent, the diarrhea occurs only during the day, and the abdominal cramps are diffuse. Women with irritable bowel symptoms tend more often to complain of constipation; men with irritable bowel more often have diarrhea. It is tempting to suggest that the non-propulsive Type II contractions predominate in constipation and that the more or less painless diarrhea is mediated by propulsive Type IV contractions, but this has not been demonstrated.

Constipation

By “constipation” may be meant hard or infrequent stools. The patient, usually a woman, begins to note infrequent bowel movements at age 15 to 20 years. Bowel movements may occur only once, twice, or three times a week; widespread belief in the benefit of a greater frequency encourages the use of laxatives. Bowel consciousness develops, and the character and frequency of the stool attract more concern. “Pencil stools” may occur; these are probably more frequently caused by the irritable bowel than by rectal carcinoma.

With the passage of years, abdominal pain and cramps develop, usually in a poorly localized area along the course of the colon, especially in the left and then right upper quadrant. The cramps last from a few minutes to many hours and are relieved by passage of gas, by an enema, or by a bowel movement. Certain foods become specific in bringing on the pain; strong spices, alcohol, raw fruits and vegetables are no longer well tolerated.

Gradually, the pain assumes larger importance to the patient than the disordered bowel function. Constipation is forgotten; a dull ache in the “gallbladder region” or a heavy cramp in the left lower quadrant may seize the attention. Constipation is accepted by both physician and the patient as the inevitable lot of womankind and is not related to the abdominal pain. The entire abdomen may be X-rayed several times until finally, because of the pain, a poorly functioning gallbladder, a “chronic appendix”, or the pelvic organs are removed. These organs may be diseased, but since they are not the source of the patient’s symptoms, their removal often compounds the symptomatic ruin by adding “adhesions” for future consideration.

Diarrhea

The diarrhea variant of the irritable bowel may begin following “infectious diarrhea” or “food poisoning”. This relationship is impossible to prove, of course, since obviously “food poisoning” is relatively common. Somehow, such a situation seems to “sensitize” the bowel to other agents.

Diarrhea in the irritable bowel may simply consist of one or more loose stools each day, or sometimes of merely an explosive bowel movement in the morning after breakfast. The patient may note that following this early morning irritability, there is no difficulty during the rest of the day. This time allowance also represents for most people the resolving of interpersonal tensions within the family—the children going off to school, the husband and wife separating, and the like. A heightened gastro-colic reflex following meals may be the only manifestation. Occasionally, diarrhea is incapacitating, however, with 20 or more bowel movements daily. This functional diarrhea differs from that due to an organic cause, in that it stops at night and can usually be controlled; there may be great urgency, but the patient never soils himself and sleep is undisturbed. Travel, or inconvenient or unpleasant toilets tend to constipate such patients; symptoms of organic origin are not so dramatically affected. Alternating with diarrhea may be periods of constipation of several days’ duration, or of normal bowel movements in the intervening periods. Some alcoholic drinks or coffee are particularly potent stimulants to diarrhea. Abdominal cramps in the diarrheal syndrome are often localized to the supra-pubic area and to the lower mid-abdomen, but pain may not be a troublesome complaint. Usually bowel dysfunction continues to be the main complaint, a contrast to the prominence of pain in the constipation variant.

Mucus

The passage of shiny mucus, mistaken by the patient for “pus” or “worms”, may be the only reason for his seeking advice. The passage of mucus casts is very uncommon, though often mentioned in the literature.

Variability

The irritable bowel syndrome may include constipation of 10 to 20 days’ duration or abdominal pain of such severity as to suggest the need for surgical intervention. This latter, the *acute spastic colon*, is probably not as rare as failure to hear about it implies.

Initiating and Exacerbating Agents

Many agents “irritate” the bowel and initiate the irritable bowel syndrome. Excessive use of laxa-

tives may be a cause; the so-called specific x-ray appearance of the colon following laxatives does not differ from the appearance of the colon in the irritable bowel syndrome. Often an attack of "food poisoning" will leave as a souvenir a train of gastrointestinal complaints; it has been suggested on poor evidence that specific food intolerance arises from the absorption of whole proteins through an inflamed and non-protecting membrane. Infections, the common cold, acute illnesses, any stress or strain, even a marked change in the weather, may bring about attacks. Sometimes, the course suggests that an accumulation of hard stool or irritating alkaline diarrhea irritates the rectum to cause "reflex" spasm and recurrent attacks.

In general, the two most important factors are emotional stress and food. Coffee, excess alcohol, salads, raw fruits and vegetables, strong spices and like foods of high roughage or irritating content are universally poorly tolerated. The relation of emotional stress is fundamental.

Psychological Factors

Patients with bowel difficulty have been found to share common personality characteristics. Rigid, perfectionistic and moralistic traits are common. The few patients who do not obviously fit this picture may have more specific, delimited histories of stressful toilet training itself, rather than having endured general strict control or family turmoil during this period of life. The roots of such character development are thought to be in childhood experience especially between the ages of 1 and 4 years. The actual traits, however, may not appear until the individual is of school age or later.

Emotional Stress

There is general agreement as to the fundamental role played by emotional tensions.⁴ No other bodily function is more strongly conditioned than bowel activity. In the acute form of diarrhea, stresses appear very specific. In young adults sexual conflicts, dating, and leaving the parents are common precipitating events. Although frequently appearing symbolic in relation to the colon, these areas of difficulty are more easily seen as situations where general anxiety is likely to rise unrecognized, to be expressed only through increased bowel activity.

In the uncovering of emotional stresses, the history plays a therapeutic role. Even patients who at first see no order in their symptoms, become aware of what situations bother them most if the history-taking is careful. Sometimes, the simple recognition that there are connections in the train of events leading to symptoms, is effective in reducing symptomatic activity, or making symptoms more tolerable.

Constitution may play a role. Family histories suggest this; sometimes an irritable bowel is the chief manifestation of tension for a family unit as well as for an individual; how much such localization is determined by constitutional or psychologic factors, remains a question.

The concept that seems best in initiating a hopeful therapeutic attitude is that many factors reduce the level at which symptoms occur. Thus, if a patient whose colonic sensitivity has been raised by an old attack of amebiasis is not under emotional stress, he may be able to tolerate rough foods easily, but when he is aggravated or anxious, dietary factors play a larger role. Such a concept of multiple causality is necessary in planning a therapeutic program.

DIAGNOSIS

By Exclusion

The diagnosis of the irritable bowel entity must be by exclusion, since the symptoms are the clinical reflection of physiologic dysfunction. A specific organic precipitating cause must always be considered. Cancer, diverticulitis, regional enteritis, ulcerative colitis, all give symptoms of disordered bowel function.

Conversely, upper gastrointestinal complaints are often attributed to duodenal ulcer, gastritis, or gallbladder disease when they arise from dysfunction of the transverse colon. The "splenic flexure syndrome" which relates gas in the bowel to pain in the left chest or in the left shoulder is merely a specific variant of the irritable bowel syndrome.

Sometimes a patient recovered from the acute pain of a duodenal ulcer is stubbornly treated with antacids because of persistent, vague, dull midepigastric distress made worse by food and relieved by a bowel movement. Such pain fits easily into an irritable bowel syndrome. So too, a gallbladder without stones may be removed for attacks resembling cholecystitis which are really the result of spasm in the right colon. Occasionally, disease of other intra-abdominal organs is said to initiate the irritable bowel reflexly; but this must be quite rare.

The possibility of systemic disease must be kept in mind; the discovery of hyperthyroidism in a patient with diarrhea, or hyperparathyroidism in a patient with constipation is infrequent, but does occur. Abdominal pain does not always arise from the gastrointestinal tract itself; pelvic disease and kidney disease cause symptoms interpreted by the careless as gastrointestinal.

On physical examination, three points are characteristic:

1. The inability of the patient to localize the abdominal pain sharply. The flat of the hand is used, or wide circular motions are made. This con-

trasts with the usual precise pointing of the duodenal ulcer patient.

2. Tenderness along the course of the colon. Often the cecum is palpable as a gas-filled tube, best described as "squashy". The descending colon may be firm and full of feces in constipation; in diarrhea, it is often firm, contracted, tubular and tender.

3. Abdominal tenderness often disappears on persistent pressure. This is in contrast to the increase in abdominal pain on continued pressure if there is structural disease, as in ulcerative colitis.

Sigmoidoscopy helps to exclude a specific cause of the irritable bowel. The mucosa is entirely normal; reproduction of the patient's pain by sigmoidoscopy confirms its colonic origin. The mucosa should be swabbed with cotton to gauge mucosal sensitivity; an inflamed mucosa is painful when rubbed. (A normal one is insensitive.) It is wise to biopsy the rectal mucosa particularly in patients who have been overseas, in an attempt to demonstrate wall-dwelling parasites like the schistosomes or amebas. Amebas, for example, may not be seen in the stool for several months following antibiotic therapy. Microscopic study of the stool for blood, ova, parasites, and fat, should be done routinely.

The barium enema is usually interpreted as "normal." However, the clinician who is careful to define what he means by the irritable bowel, may find certain clusters of findings accompanying the irritable bowel syndrome that attest to its functional background. The haustrations (which represent Type II contractions) may be exaggerated. The descending colon may be tubular, smooth, and without haustrations; this represents the Type IV mass contractions. Such a picture resembles that of chronic ulcerative colitis except for the absence of serrations and mucosal ulcerations. The wilder gyrations of the colonic border in the irritable bowel syndrome seem to be helpful in differentiation. The so-called "string-sign" of the irritable bowel is rarely seen in evacuation films. Complete evacuation of the barium suggests that distension of the colon has stimulated an extensive reaction in a "spastic" colon. Such a reaction is significant only if the patient has not had preparatory castor oil which may produce the same response.⁵

A specific cause for the patient's complaints detaches them from the irritable bowel syndrome. On the other hand, amebiasis drags with it a stubborn retinue of symptoms; despite disappearance of the parasites from the stool, colonic dysfunction persists.

Therapy of the Irritable Bowel

The program to be outlined is empirical, but it is based in part on concepts of colonic function already outlined. The majority of patients suffer as

much from the effects of anxiety in the precipitation of symptoms as from any other "irritant", but it is apparent that patients should not be confronted directly with this fact, at least until an adequate relationship with the physician has been established.

An explanation of smooth muscle physiology as it relates to colonic function is helpful to the patient; the irritable bowel over-reacts to a number of stimuli. Diet is one factor that may easily be controlled. The aim of therapy is to teach the patient how to live with his symptoms, how to control them by diet and by occasional medicine. A single mild attack of diarrhea, which may consist of only a few loose bowel movements, may be successfully treated by a short-term restriction of irritant foods. More severe cases require longer periods of management, particularly in the initial period of education.

Regardless of the symptom, and presumably of the preponderance of Type II or Type IV waves, the initial dietary formulation is aimed at decreasing distension of smooth muscle of the bowel. Smooth muscle contracts when stretched; therefore, a low residue diet is prescribed. No fruits or vegetables or "roughage" are eaten during the first few weeks. On such a regimen, diarrhea quickly disappears, but constipation becomes more marked. Such a patient must refrain from laxatives, however, which only increase the sensitivity of the colon; tap water or saline enemas are preferable.

Later, the constipated patient adds cooked vegetables and fruits to his diet. This time, more frequent bowel movements usually occur and the abdominal cramps and heaviness disappear. Such a strict regimen should be followed for at least three months, the emphasis being that it takes a long time to develop the irritable bowel and it takes a long time to get well. But at the end of three or more months, most dietary restriction and medication can be gradually eliminated. Continuation of minor dietary regulation with emphasis on "laxative foods" may be helpful.

The program differs with the patient with diarrhea. After the basic diet has eliminated the symptom, cooked vegetables are added in small amounts and as these are tolerated in ever larger and more varied quantities. Raw fruits and vegetables, however, should be avoided for some months. Tentatively, a few additions may then be made until a normal diet is gradually resumed. Patients with diarrhea suffer considerably more from idiosyncrasy and continue to be aware of foods which cause distress; they must refrain from these more or less permanently. It is, however, a perfectly mature decision to be willing, as many such patients are, to pay by discomfort the price of occasional gourmandizing. Such deliberate lapses do no great harm.

Ancillary Therapy

Diet is basic. Antispasmodics, despite their lack of theoretical utility, are helpful. Atropine in dosage of about .6 mgm. every 6 hours seems useful; occasional patients prefer a proprietary medication. Tincture of belladonna often does not seem to benefit functional disorders in the way that atropine does and has the further disadvantage of requiring a dropper. In addition, the constipated patient should drink 10 to 12 glasses of water daily. It is well for a patient to refrain from alcohol and cigarettes if he has diarrhea, but their interdiction in a patient with constipation seems unnecessary. Re-evaluation at intervals particularly by means of the sigmoidoscope, is important in the older patient. The irritable bowel syndrome does not protect against colonic carcinoma.

Psychotherapy

The immediate good results of therapy are reassuring and open the way for a general discussion of the tension factors in the patient's life. One should avoid the devastating statement that there is nothing "organically" wrong. A basically physiologic approach, increasingly diluted with discussion of psychosocial problems, is practical and rewarding.

Long-term psychotherapy or psychoanalysis has been reported useful in this illness. The irritable bowel itself is not, however, an indication for psychotherapy; such indications should arise out of consideration of the total situation of the patient, the severity of the disturbance, the other neurotic symptoms, and the motivation for treatment. Re-

ferral to a psychiatrist simply for an irritable bowel, is rarely of value. Successful management can usually be achieved by the family physician, who may use psychotherapeutic principles without deliberate intent. Reassuring support of a mildly inquisitive approach, together with the detailed understanding of the relation between life events and symptoms, is most commendable. Good results, however, are also achieved by very direct authoritarian physicians who institute strict programs of management. Such an approach sometimes brings with it an overly dependent patient.

SUMMARY

The irritable bowel is a functional abnormality of the colon, producing constipation, diarrhea or abdominal pain. Specific causes must be excluded, but once they are, intelligent application of dietary and psychotherapeutic principles, allows the patient to control his own symptoms.

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Are Doctors' Fees Today Too High?

"Compared with other services you buy, the doctor's ministrations have not risen excessively during our general inflation. Since 1948, they've jumped about 30 per cent, while hospital room rates have gone up 85 per cent.

"When you look at the increases since 1936, the disparities among the services are startling. Hospital room costs are up 264 per cent in the two decades while general practitioners' fees are higher by 72 per cent. Surgeons' prices rose even less: 59 per cent.

"Men's haircuts, shoe repairs, movie tickets, public transportation, laundry service and auto repairs have all risen much faster in price over the twenty years than has the fee the doctor gets.

"Put another way: the average worker has to work less for the same services he got from the doctor twenty years ago. If eleven office calls cost a worker a week's wages in 1936, then the same worker would have to work only a half a week for the same services today.

"Probably this is the reason why only 16 per cent of the population think the doctor's fees are too high.

"On the other hand, this same survey made by the University of Chicago and the Health Information Foundation showed that 40 per cent complained about the prices at the grocery store. Forty-five per cent objected to the cost of repairs around the house."

... EARL UBELL
United Medical Service

Steroid-Antibiotic Preparations For The Topical Treatment Of Dermatologic Conditions

RALPH L. PARKER, M.D.

Bridgeport

DURING the last several years, steroid antibiotic formulations have been widely employed for the topical treatment of many dermatologic conditions,¹⁻⁷ particularly those with an allergic component. The steroid is present to relieve the pruritus and other evidence of inflammation which characterizes many of these disorders and the antibiotic is supplied to control potential or existing secondary infections.

Although hydrocortisone¹⁻¹² and prednisolone¹³⁻¹⁹ have been the steroids most widely employed for treating skin disorders, being, respectively, substantially more effective topically than cortisone or prednisone, the halogen derivatives of hydrocortisone have recently been shown to be even more active for the purpose. The most potent of all the halogen derivatives is fluorohydrocortisone (fludrocortisone). This substance, combined with the antibiotics neomycin and gramicidin in ointment, lotion, and cream formulations, has been employed to treat a variety of dermatological conditions encountered in the author's office practice. In a few patients, a cream formulation containing also the antifungal agent nystatin has been employed. As the data will show, these preparations have, in a high percentage of cases, brought immediate relief of the pruritus and early clearance of the underlying cutaneous condition.

Materials and Methods

The patients studied were those seen in general office practice. Altogether the 150 subjects were included in this report, 58 being male and 93 female. The ages of the patients ranged from 7 months to 88 years.

The Medication

The preparation employed in treating the patients included ointment, lotion and cream formulations, all containing 0.1 percent of fludrocortisone acetate, 2.5 milligrams of gramicidin per gram of ointment or cream or per centimeter of lotion. In 115 of the patients the lotion and ointment formulations were both employed, each preparation being applied in a thick layer and massaged

vigorously into the affected area. The cream formulation, prepared in vanishing cream type base, was employed in 35 patients.

Results with Ointment and Lotion Formulations

The most favorable results with the ointment and lotion formulations were obtained in patients with contact dermatitis, neuro-dermatitis, anogenital dermatitis, and atopic dermatitis. Of 23 patients with contact dermatitis, 22 reported an "excellent" or "good" result and 1 a "fair" response. Of 24 neurodermatitis, 21 manifested an "excellent" or "good" response and 2 a "fair" response. All of 11 patients with anogenital dermatitis gave a "good" or "excellent" result. Of 20 patients with atopic eczema, all but 4 manifested "good" to "excellent" improvement.

Only smaller numbers of patients were treated for such conditions as nummular eczema, atopic dermatitis, urticaria, seborrheic dermatitis, and lichen planus, but a favorable response was generally or often obtained. With a few patients suffering from dermatophytosis, moluscum contagiosum, stasis dermatitis, pustular bacterid, psoriasis, pemphigus, dermatitis factitia, lupus erythematosus, and prurigo, a relatively poor response was seen. The data are summarized in Table I.

Results with Cream Preparation.

All of 20 patients with contact dermatitis treated with Florinef-S Cream responded promptly to treatment, this response being regarded as "excellent" in 14 and as "very good" in 6 individuals. Generally, complete remission was seen within a week and, in all, it had occurred by the eleventh day. In 15 of these patients with *Rhus* dermatitis, 11 manifested an excellent response, remission occurring within a week in all but one. Of 5 of these patients sensitive to cosmetics, detergents, or a plating solution, 3 gave an excellent response in a week or less. In none of the 35 patients was any evidence of irritation or other untoward reaction observed. Although in one patient with hydadenitis suppurativa, the condition seemed to worsen during treatment. None of the 35 patients treated

with the cream formulations manifested any form of side effect attributable to the medication. The results are shown in Table II.

TABLE I
SUMMARY OF RESULTS OF TREATING VARIOUS CONDITIONS
WITH FLORINEF-S LOTION AND OINTMENT

(Results by sex, according to degree of improvement)

CONDITION TREATED	TOTAL NUM- EXCEL-					
	BER	LENT	GOOD	FAIR	POOR	WORSE
Contact Dermatitis	23	19	3	1	—	—
Neurodermatitis	24	10	11	3	—	—
Anogenital Dermatitis	11	3	8	—	—	—
Atopic Eczema	20	5	11	4	—	—
Nummular Eczema	4	1	2	1	—	—
Atopic Dermatitis	4	1	1	1	1	—
Toxic Dermatitis	1	—	—	1	—	—
Urticaria	4	1	3	—	—	—
Seborrheic Dermatitis	4	—	2	1	1	—
Psoriasis	2	—	—	1	1	—
Lichen Planus	3	—	2	—	—	1
Pemphigus	1	—	—	1	—	—
Dermatitis Factitia	1	—	—	1	—	—
Lupus Erythematosus	1	—	—	—	1	—
Drug Eruption	1	—	—	1	—	—
Painful Nodule of Ear	1	—	—	1	—	—
Dermatophytosis	1	—	—	—	1	—
Stasis Dermatitis	3	—	—	3	—	—
Molluscum Contagiosum	1	—	—	—	1	—
Sycosis Barbae	2	1	—	1	—	—
Pustular Bacterid	1	—	—	1	—	—
Infectious Eczematoid Dermatitis	1	—	1	—	—	—

Discussion

The present study was undertaken to determine the value of steroid-antibiotic combinations for the topical treatment of various dermatologic conditions, especially those with a prominent allergic component. The results have confirmed the previously reported clinical usefulness of these preparations for this purpose.²⁰⁻²⁴

The results obtained with new cream formulations in the 20 patients with contact dermatitis were particularly impressive. In every case, the pruritus was relieved immediately after treatment began and, within a few days, clearing of the condition occurred among the patients in this series. It is the author's opinion that, in the conditions treated with the cream, the results with the non-greasy type of formulation represented by the cream were superior to those with analogous greasy ointment formulations.

From 9 of the 16 patients treated with the cream preparation containing the antifungal agent nystatin, *Candida albicans* was isolated prior to the

beginning of therapy. It seems reasonable to assume that the efficacy of the preparation in these patients was related to the presence of the nystatin. It is noteworthy, however, that less satisfactory effects were obtained in some of these individuals when an ointment containing nystatin alone was employed.

TABLE II
RESULTS IN 35 PATIENTS WITH CONTACT DERMATITIS
TREATED WITH FLORINEF-S CREAM

DIAGNOSIS	NUMBER OF PATIENTS	RESULTS IN NUMBERS OF PATIENTS		
		EXCELLENT	GOOD	WORSE
Rhus dermatitis	15	11	4	0
Erosio interdigitalis blastomycetica*	6	4	2	0
Erythrasma*	3	1	2	0
Detergent dermatitis	2	1	1	0
Cosmetic dermatitis	2	2	0	0
Plater's dermatitis	1	0	1	0
Paronychia*	2	1	1	0
Omphalitis*	1	1	0	0
Anogenital dermatitis*	1	1	0	0
Seborrheic dermatitis*	1	0	1	0
Hydadenitis suppurativa*	1	0	0	1
Totals	35	22	12	1

* Treated with Florinef-S Cream to which nystatin had been added.

This study was also pursued to estimate the hazard which some clinical investigators have associated with the topical application of fludrocortisone^{25,26}—namely, the unfavorable effects on weight, cardiac action, and electrolyte balance as the result of the absorption of topically applied fludrocortisone. It appears, from the results of this study, that the absorption of fludrocortisone rarely occurs in an amount sufficient to induce side effects even when the preparation is rubbed vigorously into the skin during repeated applications (up to 8 times) daily over many months.

Summary

A. The usefulness of fludrocortisone-neomycin-gramicidin ointment and lotion formulations for topical treatment has been studied in 115 patients suffering from various dermatologic conditions. Particularly favorable responses were obtained in fairly large series of patients with contact dermatitis, neurodermatitis, anogenital dermatitis, and atopic eczema. In small numbers of patients with nummular eczema, atopic dermatitis, urticaria, seborrheic dermatitis, and lichen planus, a favorable response was often manifested.

Generally poor results were seen in patients with dermatophytosis, molluscum contagiosum, stasis dermatitis, pustular bacterid, psoriasis, pemphigus, dermatitis factitia, lupus erythematosus, and prurigo.

B. A cream preparation containing fludrocortisone, neomycin, and gramicidin in a vanishing cream type base (Florinef-S Cream) gave good to excellent results in all of 20 patients with contact dermatitis (principally *Rhus* dermatitis). The same formulation to which an antifungal agent, nystatin, has been added (Mycostatin Florinef-S Cream) gave good to excellent results in 15 of 16 patients with various dermatologic conditions. *Candida albicans* has been cultured from 9 patients in this group.

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Management Of Extensive Dry Skin Conditions

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DRY skin is probably the most common condition seen by dermatologists. However, only a relatively few of the people with this disorder find their way into the physician's office. Most people, and woman in particular, resort to the use of highly publicized and costly oils and greases which, while masking the dryness of the skin by their "smooth" feel, do not contribute greatly to the restoration of the normal skin.

Fats and oils alone do not always help in restoring flexibility to the skin. Also their use is limited to small areas of the body. The problem of the dry skin becomes difficult when large areas of the body are affected.

An important problem confronting the physician is the frequent case where dry skin is found in conjunction with other manifestations such as itching and the presence of visible lesions. Here, emollients alone do not suffice. What is needed is a combination of a soothing agent with a lubricating medium.

For our dry skin cases, in recent months we have been using a new product which contains colloidal oatmeal impregnated with emollient oils in the amount of 35 per cent. Colloidal oatmeal is the concentrated colloid portion of the oat grain found to be very effective in the treatment of skin conditions.¹⁻³ This product (Aveeno "Oilated") * is a fine powder, which when dispersed in the bath water (3 to 4 rounded tablespoons to a tub of warm water), forms a colloidal suspension with the oils in a semi-emulsified state.

This new colloidal emollient bath therapy was employed in a series of 111 patients seen in private practice. Of this group 100 patients presented dry skin manifestations along with other symptoms or diseases. (See Table I)

RESULTS

In Table I we have listed various diseases included in this series of 111 cases. These cases were selected because the primary condition was due to dryness of the skin. The patients were instructed to use the baths daily and, in exceptional cases,

morning and evening. Frequently it was necessary to employ topical applications and medication orally as adjunct to the baths. In our experience, when the colloidal emollient baths were omitted, treatment was prolonged and patients complained of recurrent itching. This confirmed our belief that the baths possessed antipruritic properties in addition to aiding the restoration of oils to the skin.

The patients were immersed in the colloidal solution from 15 minutes to one hour depending on the dermatological condition and age of the patient. In those conditions where the affected areas are localized to the face, arms, legs, etc., the solution is efficacious when used as a wet dressing.

In all cases, there was great improvement in the flexibility and smoothness of the skin. Also there was a diminution of pruritus and irritation when they were present. None of the patients complained of the bath regimen. Many asked if the baths could be used routinely since it did impart a pleasant, soft feel to the skin.

With respect to infants and children, there was universal agreement on the part of the mother that the colloidal emollient baths were easier to use than the lotions or creams previously prescribed. As to the therapeutic aspects, rapid relief was evidenced in all of the infants and children.

CASE REPORTS

I. E. M., a twenty-one year old, white, married female who gave a history of having recurrent attacks of atopic dermatitis since nine months of age was seen on April 17, 1957. Present attack began eighteen months previously. Examination presented a severe erythematous scaly eruption with lichenification of the skin on the face, neck, chest and both extremities. There were definite excoriations in these areas due to severe pruritus. Treatments consisted of daily cornstarch baths, topical applications of a one percent corticosteroid ointment and antihistamine tablets, 50 mgm. t.i.d.

April 26, 1957—The patient returned complaining bitterly of itching. She thought she was sensitive to the ointment and stopped using it.

May 24, 1957—She showed no improvement and was told to continue with the previous prescribed treatment in addition to anointing herself with corn oil following the cornstarch baths.

* Aveeno® "Oilated" is manufactured by Aveeno Corporation, 250 West 57th Street, New York 19, N. Y.

TABLE I

DISEASE	NUMBER OF PATIENTS
Atopic Dermatitis	3
Contact Dermatitis	24
Diabetic Dermatitis	1
Disseminated Neurodermatitis	1
Dry Skin	11
Eczematoid Epidermophytosis	2
Ichthyosis	7
"Id" reaction, Monilial	1
Infantile Eczema	3
Insect Bites, Multiple	1
Lichen Planus	1
Pityriasis Rosea	3
Psoriasis, Irritative	14
Seborrheic Dermatitis	14
Senile Pruritus	16
Urticaria	1
Varicose Eczema	7
Winter Itch	1
	—
	111

June 14, 1957—She returned and still complained of severe itching. Aveeno "Oilated" baths, morning and evening, were substituted for the cornstarch baths and the corn oil treatment.

August 30, 1957—Patient was relieved from the itching to the extent that she did not think it was necessary to report during the summer. Examination of the affected parts showed great improvement.

September 20, 1957—Skin was almost completely returned to normal. Patient states that Aveeno "Oilated" baths were very helpful and continues to use them. She discontinued other treatment.

October 1, 1957—Some residual dermatitis was noticed in the antecubital fossae. She was instructed to apply corticosteroid ointment topically. Patient felt that since condition was localized she could get along without taking the baths.

II. C. G., a forty-eight year old, white, housewife was seen on June 21, 1957. She complained of severe itching of face, hands, legs and feet that began thirteen days previously after walking barefoot in the woods. Two days later she noticed swelling of these parts with formation of blisters. She visited a physician who prescribed wet dressings of Burow's solution (1:16) and gave her several injections of poison ivy extract.

Upon examination an erythematous, vesicular and edematous eruption, typical of a contact dermatitis (ivy), was seen on these areas. Aveeno "Oilated" baths were prescribed morning and evening. No other medication was used. Patient responded well to this form of therapy and was discharged ten days later.

III. C. L., a thirty-two year old, white, housewife was first seen at the office on March 24, 1956 complaining of a moist, scaly, erythematous, itchy eruption located behind the ears, neck, arms and dorsum of both hands. Duration nine months. Diagnosis, seborrheic dermatitis.

Treatment consisted of x-ray therapy, topical application of one percent corticosteroid cream, and wet dressings of Burow's solution. Antihistamine tablets, 50 mgm. b.i.d., were given. This treatment was continued to June 23, 1956 when the patient was discharged as improved.

She had a recurrence on July 6, 1957, severe in character, with an intense amount of itching. Aveeno "Oilated" baths were prescribed for one hour immersions, b.i.d., with x-ray treatments. She returned on July 13, 1957, greatly improved with the itching alleviated and the lesions dry. The patient was discharged on July 20, 1957 with the skin cleared.

She stated that the baths were easy to use and soothing to the affected areas. She felt that the colloidal baths shortened the duration of treatment.

CONCLUSIONS

A new colloidal emollient bath preparation (Aveeno "Oilated") was employed in a series of 111 cases of patients with various types of skin conditions. A type of bath therapy known as Aveeno "Oilated" appears to be an effective method of reducing the dryness and pruritus associated with these dermatoses. It is particularly recommended in the chronic dermatoses seen in older persons and also in infants and children and has been found efficacious in the treatment of extensive moist dermatoses involving the skin folds of the body, such as the axilla, buttocks, groin and antecubital fossae. It is also recommended as a wet dressing applied to small areas.

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Trilafon (Perphenazine) As A Tranquilizer In Dermatoses

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EMOTIONAL factors, particularly anxiety and tension, play a well recognized role in the pathogenesis and exacerbation of many inflammatory skin diseases.¹⁻⁷ Until the tranquilizing drugs were introduced a few years ago, dermatologists relied chiefly on the barbiturates, bromides, and chloral hydrate to alleviate the emotional component; however, these drugs usually produced drowsiness and mental clouding, and the risk of addiction was always present. Therefore, it is not surprising that the new ataractics, which are considered nonhabit-forming and relatively nontoxic, have been received enthusiastically by physicians in every branch of medicine. Several of these drugs have been recommended for use in the management of diseases of the skin.

This report deals with an evaluation of Trilafon (perphenazine), a new amino derivative of chlorpromazine,^{8,9} which has shown promising results in early clinical trials.¹⁰⁻¹⁴

MATERIALS AND METHODS

Two groups of patients were observed. Group 1 consisted of 52 patients with dermatologic diseases in which emotional factors obviously predominated. They received from 4 to 12 mg. Trilafon* daily. Group 2 consisted of 74 patients who presented local or systemic allergic conditions and inflammatory skin diseases of varied etiology, in whom itching and nervous tension were the predominating symptoms. They received 4 to 12 mg. Trilafon daily and 5 to 15 mg. Meticorten* (prednisone) daily. All medication was administered orally.

The patients were observed for periods of from three days to three months, during which time they were instructed to avoid local applications of ointments or lotions.

* The Trilafon and Meticorten used in this study were supplied by Dr. G. Kenneth Hawkins of the Division of Clinical Research, Schering Corporation, Bloomfield, New Jersey.

CONTROLS

In a previous study among a number of patients placebos, substituted for tranquilizers, were universally rejected by the patients as ineffective. For this reason the use of placebos was not instituted in this study.

TABLE I
RESULTS OF THERAPY WITH TRILAFON

INDICATION	NUMBER OF PATIENTS	RESULTS		
		GOOD	FAIR	POOR
Psychogenic pruritus	10	6	2	2
Plastic planing	10	6	2	2
Circumscribed neurodermatitis	10	8	2	0
Psoriasis	6	2	2	2
Chronic urticaria	6	5	1	0
Psychogenic excoriations	3	2	1	0
Rosacea	2	0	0	2
Glossodynia	2	1	1	0
Lichen planus	2	1	1	0
Alopecia areata	1	0	1	0
Summary	25	31 (60%)	13 (25%)	8 (15%)

RESULTS

The response of the patients in Group 1 to Trilafon is summarized in Table I. Of the 52 patients observed, 31 (60 per cent) showed good results and 13 (25 per cent) had fair results. In eight patients (15 per cent) the clinical response was unsatisfactory.

The six patients with urticaria, six patients with psychogenic pruritus, one patient with glossodynia and eight patients with circumscribed neurodermatitis remained symptom-free for one month after therapy was discontinued, although appreciable lichenification was still apparent in the patients with neurodermatitis. Apparently Trilafon relieved nervous tension to the extent that the habitual scratch reflex was abolished.

The response of the patients in Group 2 is summarized in Table II. Initially these patients had

TABLE II
RESULTS OF THERAPY WITH TRILAFON AND METICORTEN

INDICATION	NUMBER OF PATIENTS	RESULTS		
		GOOD	FAIR	POOR
Eczematoid dermatitis	17	10	6	1
Atopic dermatitis	12	8	3	1
Dermatitis seborrheica	12	10	1	1
Dishydrosis	8	6	2	0
Pruritus vulvae	6	4	1	1
Pruritus ani	5	3	1	1
Nummular eczema	3	2	1	0
Eczematous external otitis	3	2	1	0
Prurigo	2	1	1	0
Dermatitis medicamentosa	2	1	1	0
Infectious excematoid dermatitis	2	1	1	0
Dermatitis herpetiformis	1	0	0	1
Varicose eczema	1	0	1	0
Summary	74	48 (65%)	20 (27%)	6 (8%)

received Trilafon alone for from four to seven days but, although the drug relieved nervous tension, the cutaneous symptoms were not improved. Therefore, we instituted concurrent therapy with Meticorten. Of the 74 patients, 48 (65 per cent) had good results; the severity of the skin lesions was reduced significantly and pruritus was relieved completely. Fair response was obtained in 20 patients (27 per cent); the cutaneous manifestations improved and itching was appreciably reduced. Results in the other six patients (eight per cent) are classified as poor since the skin lesions did not improve significantly although pruritus diminished.

In seven patients with severe atopic dermatitis and in six patients with widespread seborrheic dermatitis we were able to reduce dosage of Meticorten to maintenance levels of 5 or 10 mg. daily. One patient remained symptom-free for two weeks, and another for three weeks, after Meticorten was discontinued. Both were maintained on Trilafon, 4 mg. daily. Two patients with dishydrosis remained symptom-free on 8 mg. Trilafon daily; this is not surprising in view of the fact that emotional factors operate in nearly all cases of idiopathic dishydrosis.

SIDE EFFECTS

Five (four per cent) of our 126 patients became drowsy. In addition, three patients reported insomnia, and there was one instance each of vertigo, frequency of micturition, and hyperirritability with motor restlessness, as a result of Trilafon therapy. All side effects disappeared when the drug was discontinued.

No pathologic changes in the blood or urine occurred in any of these patients. We did not observe any photosensitization, alterations in body temperature, or allergic manifestations.

COMMENT

Trilafon exerts a beneficial effect on the course of allergic types of dermatitis which is seen so frequently in dermatologic practice. We agree with Eisenberg¹⁵ who states that the tranquilizers not only relax the tense and anxious patient but also produce a "secondary gain" in that the intensity of allergic symptoms is diminished considerably.

The tranquilizers do not replace desensitization or other specific therapy, but they are extremely useful in relieving emotional factors which are significant components of most allergic and pruritic dermatologic conditions.

CONCLUSION

In dermatologic conditions in which tension and anxiety is a significant component, Trilafon is a valuable adjunct to specific or topical therapy.

SUMMARY

Trilafon (perphenazine), 4 to 12 mg. daily, was administered to 52 patients who presented skin disorders with a predominating emotional component. Good results occurred in 31 (60 per cent); fair results occurred in 13 (25 per cent), and poor results occurred in 8 (15 per cent).

Similar doses of Trilafon were administered to 74 patients who also received from 5 to 15 mg. Meticorten (prednisone) daily; these patients presented local or systemic allergic conditions and inflammatory dermatoses of varied etiology with a psychogenic element. Results were good in 48 patients (65 per cent); fair in 20 (27 per cent), and poor in six (eight per cent).

Side effects developed in 11 (8.7 per cent) of the 126 patients. Drowsiness occurred in five, three patients reported insomnia, and there was one instance each of vertigo, frequency of micturition, and hyperirritability with motor restlessness. All side effects disappeared when dosage was discontinued and there were no systemic pathologic changes in any patient.

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Hereditary Factor Implicated in Multiple Sclerosis

A hereditary factor was termed "a distinct possibility" as a cause of multiple sclerosis after a new study of twins suffering from the disease.

Heredity has long been considered as possibly playing a role in multiple sclerosis, a disease of the central nervous system.

A preliminary report of the study—one of the first conducted among twins and their relatives—was made by two Chicago scientists in the current *Archives of Neurology and Psychiatry*, published by the American Medical Association.

The study involved 63 sets of twins, of whom 54 sets were completely studied and nine of whom are still being studied. They were selected through the National Multiple Sclerosis Society who advertised for twins in whom at least one had multiple sclerosis.

The study showed that among identical twins, there were two sets in whom both members definitely had the disease; five sets in whom it appeared that both had the disease, and 22 sets in whom only one twin had the disease.

Among the non-identical twins, there was one set in whom both twins had the disease; three in whom it appeared that both had the disease, and 21 in whom only one twin had it.

Using "the most rigid diagnostic standards," both members of only three sets definitely had multiple sclerosis; however, with less rigid standards, 11 sets could be considered as having "concordant" disease, the authors said. They noted that it is sometimes difficult to tell definitely if a nervous disorder is multiple sclerosis, and that there are cases in which the disease process "burns out" before it presents the standard symptoms.

It is possible that more concordant cases may appear in future years, since there is great variability in the age of onset of disease. In addition, the partial symptoms presented by many of the twins "will probably flower into the full clinical picture in many of them, while others now quite free may come to show the full-blown disease," the authors said.

It seems most unlikely, they continued, that multiple sclerosis is of purely genetic origin. "There must be more than one cause if genetic factors play any role at all. Thus it is possible that a genetic factor may require the addition of an environmental agent before the disease can develop. Concordance in identical twins may thus fail to develop because one of the pair has not yet encountered the unknown environmental factor necessary to produce the disease."

Liver Necrosis After Iproniazid Therapy

Report of a Case

JOHN E. MORRISON, M.D., AND ZANNIS KALAMBOUKIS, M.D.
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IPRONIAZID (Marsilid) when used in the treatment of tuberculosis has produced certain mild toxic effects in many patients which have been reported.¹⁻² Since it has been used as a central nervous system stimulant or "psychic energizer," several cases of severe liver damage and death have been described.³⁻⁶

It is the purpose of this report to describe another death due to liver necrosis following iproniazid therapy.

A 46 year old female patient was transferred to the Medical-Surgical Service of this hospital on May 19, 1958, because of jaundice of 24 hours' duration.

She had been continually hospitalized for a hebephrenic schizophrenic reaction since 1939. Except for her psychosis, her general health had been good. Numerous laboratory examinations during her hospital stay were normal. Iproniazid, 150 mg. daily, had been given to her from February 13, 1958, to April 17, 1958, when the dose was reduced to 75 mg. daily. This program had continued until the onset of jaundice. During this period, she had not received other medication, transfusions or plasma and had not been exposed to patients with hepatitis. There was no history of alcoholism, liver or gallbladder disease.

The illness had begun with anorexia, one episode of vomiting and weakness. Her urine was noted to be dark in color. She had not had chills, and her temperature had remained normal.

Physical examination revealed her to be deeply jaundiced but afebrile. The liver edge was felt 5 cm. below the right costal margin. It was smooth, firm and nontender. The spleen was not enlarged. The remainder of the findings were within normal limits.

Results of laboratory examinations follow: The urine was dark brown in color and strongly positive for bile with a specific gravity of 1.020. Tests for albumin and sugar were negative, and the sediment contained an occasional red blood cell. In the blood, the hemoglobin concentration was 11

grams per 100 cc.; the erythrocytes numbered 3,890,000 and leukocytes 7700 per c.m.m. (polymorphonuclear leukocytes 74% and lymphocytes 26%). The erythrocyte sedimentation rate was 23 mm. in one hour. The blood sugar concentration was 104 mg. per 100 cc.; the urea nitrogen 29 mg. %; and the icterus index was 110 units. The alkaline phosphatase level was 14.4 Bodansky units; the total bilirubin was 22.2 mg. %, and the thymol turbidity was 10.5 units. The serum albumin was 3.7 and the serum globulin was 3.8 grams per 100 cc. The prothrombin time was 12 seconds (normal 13 seconds).

The hospital course was marked by deepening jaundice, weakness and finally increased confusion and agitation with rising temperature. Therapy consisted of bed rest, antihistamines and, late in the illness, antibiotics. The patient died 7 days after the appearance of jaundice.

AUTOPSY FINDINGS

The body was that of a well developed, well nourished white female appearing to be the stated age of 46 years. The skin and sclerae were jaundiced. There was slight hair growth on the chest and face and excessive growth on the legs. Brain weighed 1285 grams. There was a recent hemorrhage within the subarachnoid space of the cerebellum, approximately 3 cc. The cerebral arteries were elastic and free of atheromatous changes. The peritoneal cavity contained approximately 20 cc. of viscid pink-colored fluid. The visceral and parietal surfaces of the peritoneal cavity and pleural cavities were scattered with innumerable petechiae and ecchymoses.

The heart, coronary arteries and aorta were not remarkable.

The lungs were congested and edematous. The mucosa of the trachea and bronchial tree was slightly injected and covered by a mucous material. Liver weighed 910 grams. The capsule was wrinkled and brown-yellow in color. The anterior edge could be bent at right angles without tearing the tissue. The liver cut with decreased resistance. The surfaces were soft in consistency and brown-

yellow in color mottled with deep purple red. The gallbladder, cystic, hepatic and common bile ducts were not remarkable. The spleen and adrenal appeared to be normal. The mucosa of the G.I. tract was scattered with petechiae and ecchymoses. The kidneys weighed together 210 grams. The capsule stripped with ease. The outer and intrapyramidal cortex was of a pale-pink color. In the deep cortex extending slightly into the medulla was a surrounding zone of hyperemia.

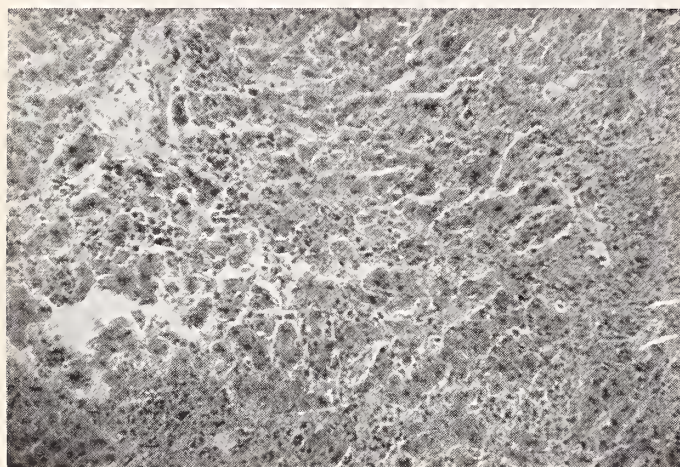


FIGURE I

Hepatic cells have been destroyed. Proliferation of bile ducts.

MICROSCOPIC DESCRIPTION

Examination of the brain revealed marked congestion of the leptomeningeal blood vessels and perivascular hemorrhages in the subarachnoid space of the cerebellum.

Histologic examination of the liver revealed extensive necrosis of the liver cells throughout the lobule and in many adjacent lobules. Few of the necrotic cells showed evidence of preceding fatty degeneration. The bile ducts did not show necrosis, in some areas were proliferated. There was no evidence of necrosis of the connective tissue or the endothelial cells lining the sinusoids. There were several histiocytes containing hemosiderin. Moderate monocyctic infiltration was noted. (Figure 1)

Examination of the kidneys revealed necrosis of the epithelium of the proximal convoluted tubules.

The cells were swollen with complete loss of nuclei. (Figure 2) The glomeruli were not remarkable.

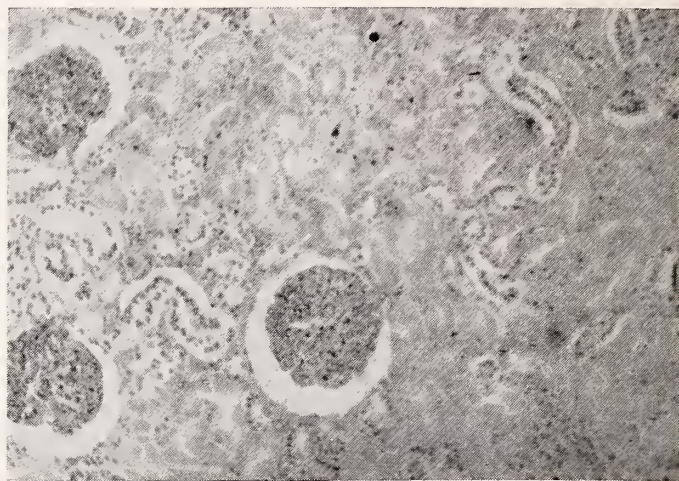


FIGURE II

Extensive necrosis of the epithelium of the proximal convoluted tubules.

SUMMARY

A 46 year old woman died during the third month of iproniazid therapy with the clinical picture of fulminating hepatitis. Post mortem examination revealed severe necrosis of the liver and kidneys.

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An Intra-Abdominal Giant Nabothian Cyst

MARK SOLOMKIN, M.D., AND WALTER TAUBER, M.D.
Hartford

AN intra-abdominal giant Nabothian cyst is an oddity.

H. C., a 37 year old para 1-0-0-1 has been followed since 1949 for a left ovarian cyst. Prior to this, in 1931, the patient was operated upon for an ovarian cyst. At surgery a double uterus was found and an appendectomy done. The patient was re-operated in 1940, again with the diagnosis of ovarian cyst, but again no pelvic organ was removed.

In 1943 she was delivered by caesarean section of a 5 lb. 4 oz., (2385 Gm.) living infant. At the time of caesarean section both tubes and ovaries were found to be normal. The left (non-pregnant) horn was removed.

She was first seen by one of us (M.S.) in June of 1956 when the cystic left adnexal mass was about 8 cm. in diameter. The mass increased in size and in October of 1957 a laparotomy was done.

On admission in October 1957, physical examination and routine laboratory studies were within normal limits, with the exception of the intravenous pyelogram which showed a normal right kidney, but no dye was excreted by the left kidney. Prior to operation, the patient was cystoscoped (Dr. Walter Schloss) who found no ureteral

orifice. A catheter was placed in the right ureter.

At laparotomy the right tube and both ovaries were normal. The left tube was missing.

Attached to the uterus on the left, at the level of the internal os, and extending into the broad ligament, was a mass equal in size to the uterus. The left kidney was palpated and found to be smaller than normal and irregular. The uterus, with cervix, and the mass were removed. The patient made an uneventful recovery.

The pathologic findings (Dr. I. Rothstein) were as follows:

" . . . Section of cyst shows the lining to be composed of columnar epithelium of the goblet cell type with secretory cytoplasm. . . *Diagnosis*: "Uterus with giant Nabothian cyst."

We have speculated that sufficient cervical glands were left in the abdomen during the surgery in 1943, when the left horn of the uterus was removed. These glands remained viable with continued function over the years, and finally grew into the present cyst found at laparotomy.

SUMMARY

An intra-abdominal adnexal tumor found to be a giant Nabothian cyst is described.

A Plea to Members

Now that difficulties between the *Connecticut State Medical Society* and the Connecticut Medical Service are being settled, one can only wish that the membership of the society would continue to take the same personal interest in all the business of the State Society and its component County organization which made the solution of the recent dispute so favorable to the continuation of our control of medical practice in Connecticut. Regardless of the specific matters in dispute, basically it was an effort on the part of the medical profession to prevent further lay control of the practice of medicine.

There are still many battles to be fought if the lay control of medical practice is to be stopped and rolled back. Now that the rank and file of the membership in the state society have installed officers in the State and County organizations responsive to what they consider their best interest they have committed themselves to the responsibility of supporting those officers by their attendance at business meetings, by critical reading of the minutes of the Council and the House of Delegates and by making known to their representatives in those bodies their considered opinions in matters to be considered. Unless these things are done we may expect that in time the same undesirable conditions which existed before will occur again.

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"Colitis"—Iatrogenic Disorder

The diagnosis of "colitis" is made too often, too loosely, and usually without justification. Such a diagnosis is practically always untenable and results only fastening a iatrogenic disease on the poor patient who associates this word with a serious disease like ulcerative colitis to which it bears no relationship or resemblance in any way whatsoever. In fact, one of the strongest arguments against the psychosomatic etiology of ulcerative colitis is that the spastic or irritable colon, the disorder usually called "colitis" is subjected to just the stresses and strains which are considered to cause ulcerative colitis. Yet patients often have an irritable or spastic colon for many years without any evidence of ulcerative colitis developing and it is well accepted among gastroenterologists that the irritable colon never leads directly to ulcerative colitis, though ulcerative colitis can occur in the patient with irritable bowel, but in a percentage no higher than the normal population.

"Colitis" means inflammation and it should not be used in the absence of inflammation. It would be much better to eliminate it from our vocabulary and use and say what we really mean, which is irritable colon or irritable bowel. The irritable bowel makes up one of the most common syndromes and is one of the most frequent diagnoses in patients with gastrointestinal complaints. However, a major pitfall in this respect continues to be the fact that this diagnosis represents only too often a catch-all wastebasket for abdominal distress of uncertain and indefinite origin. This latter situation represents a serious draw-back in every respect, a danger to the patient's well-being as well as a snare and delusion for the doctor. The article on this subject in this month's Journal is an authoritative and excellent review of a difficult problem, and it is therefore doubly valuable and timely. Although the gastroenterologist may tend to stress, as I believe he should, the non-psychiatric etiological factors involved, whereas the psychiatrist naturally stresses the psychic background, I believe that the truth lies between the two, as is so often the case.

J. K.

Regarding Tranquilizing Drugs

"Every evil, however, has its counterpoise of good."

—Caleb Hillier Parry.

In the past few years a series of so-called tranquilizing drugs has been in use, technically ataractics and colloquially, happiness pills. A recent report of the Committee on Public Health of the New York Academy of Medicine presents a useful and informative summary of their actions. It is

pointed out that it is difficult to draw a sharp line between tranquilizers and sedatives, but it is clear that the tranquilizers are very rarely habit forming. They consist of two groups: (1) those derived from Rauwolfia and (2) synthetic compounds, Meprobromates, commonly known under proprietary names such as Miltown and Equanil. Unquestionably these tranquilizers are useful, notably in quieting psychotics and very tense patients. Their use has lessened the problems of custodial care in hospitals for the insane, reduced admissions, and brought about earlier discharges. The extent of their use to relieve anxiety and tension is indicated by an estimate of the American Psychiatric Association that 35 million prescriptions for them were filled in 1956. It has become apparent that if used in too large doses they may produce undesirable side-effects. Chlorpromazine and Reserpine may at times produce Parkinsonism, which is however reversible, and also allergic dermatitis, constipation, agranulocytosis, torsion syndrome and depressive reactions. More than one-third milligram of Reserpine daily may lead to hyperacidity and in ulcer patients to hemorrhage or perforation. Even suicidal attempts may follow too large dosage and excitement rather than sedation. Severe diarrhea and diplopia may occur. In cardiac patients hypotension and fluid retention have been noted. A daily dose of 0.25 milligram of Reserpine is safe, but tranquilizing drugs should be used only under medical supervision and their sale over the counter without a doctor's prescription should be made illegal. If possible, extravagant claims by their manufacturers should be curbed as occasional fatalities have been reported to the New York Department of Health.

G. B.

*Bull. New York Acad. Med., 1957, Vol. 33, No. 4, (p. 282).

Jaundice Due to Medication, Particularly Thorazine

"Tranquility is the old man's milk."

—Thomas Jefferson.

It has been known for many years that some commonly used medicines may cause damage to the liver with resulting jaundice. Among the older drugs chloroform, arsphenamine, and atophan are well known examples, but there are many more. Most new drugs go through certain phases: first, the ballyhoo stage, particularly if the medicament is notably successful in the amelioration of some symptom or disease; second, a stage of reaction when unpleasant or dangerous side effects are reported; finally, a stage of balanced appraisal when both the advantages and disadvantages have been studied and the indications and contraindications can be clearly defined. It is to be noted that some-

times it may take several years before certain untoward effects are noted and that the mechanism of the hepatotoxic effect is not always the same. Obviously a patient with a past history of liver disease should not be given such drugs. Less than two years ago a new drug, chlorpromazine, was introduced under the trade name Thorazine. It has the effect of relieving anxiety, tension, and fear, symptoms which are common and disturbing in patients suffering from emotional stress no matter what the cause of this may be. The drug does not interfere with mental acuity and lacks the depressive effect of most of the common sedatives.

In an informative article on Thorazine Jaundice, Drs. Gibbons, Reeves, and Hill have recently pointed out the peculiarities of this form of jaundice, particularly the fact that it closely imitates, both clinically and on laboratory testing, the extrahepatic obstructive form of jaundice. From a study of four patients who developed this complication they conclude that Thorazine may cause a diffuse intrahepatic stasis of bile, that Thorazine jaundice may imitate the symptoms and signs of obstructive jaundice from gallstones or cancer and, for that reason, all jaundiced patients should be questioned as to the use of Thorazine lest unnecessary abdominal operations be performed on them. They point out that some patients who are taking Thorazine may develop also a true obstructive jaundice so that great care must be exercised in reaching a diagnosis of Thorazine jaundice. They suggest the wisdom in patients taking Thorazine of testing the urine for bile once or twice a week. Their observations are particularly important because of the imitation, in patients taking Thorazine, of organic obstructive jaundice.

G. B.

*Gibbons, Thomas B., Reeves, Robert L., and Hill, Lucius D. Bulletin of the Mason Clinic, 1955, Vol. 9, No. 4.

Heart Patients Can Work

An aura of fear which surrounded cardiac patients as well as their doctors is gradually giving way to the confidence that a great many individuals who have heart disease or who have survived an acute myocardial infarction can and should make an economic recovery. In fact over 50 per cent of those who recover from a myocardial infarction do return to work. Furthermore the number of subsequent attacks of myocardial infarction, the number of patients who developed congestive failure or the number of those who subsequently died was no greater in the working group than in those who did not return to work even though the non-workers included a large number of extremely ill patients.¹ Reports from classification units are in accord that continued regulated employment had no adverse

effect on the course of patients that had recovered from myocardial infarction. Billings² and co-workers reported that the mortality rate for patients following myocardial infarction who were able to return to some type of useful work was higher than that in the general population only in the first 2 years. After 3 years it paralleled that for the Tennessee population of the same age, sex and racial distribution. Stated in another way, those individuals who have survived three years need have no fear that they are more vulnerable to another heart attack than are those of the general population. With the present approach through surgery, diet and chronic anti-coagulation, to prevent recurrences of thrombosis, even the patients whose heart attack occurred more recently than three years may be encouraged, since Billings report appeared in 1949 before these three approaches had been perfected. When one reflects that 75 per cent of patients with the first attack of myocardial infarction were found to be in good health at the end of one year after their attack, it may turn out that with proper management even such patients may not have to worry too much about their future productivity.

In general the onset of rehabilitation paralleled the functional cardiac status.³ It is self evident that the patient who survives the initial attack but is disabled by congestive heart failure, frequent angina pectoris, atrial fibrillation or cerebral embolism will live and work less than patients who made a good functional recovery. Nevertheless many patients particularly physicians returned to work despite symptoms of coronary insufficiency and even heart failure. Weiss found that most patients returned to some form of gainful employment in an average time of three months after the attack. This parallels information obtained from pathological studies that six weeks to three months are required for firm healing of a scar after experimental myocardial infarction. However, no fixed criteria for the decision to return can be employed. Each patient had his own physical, physiological, psychological and economic problems which required evaluation. He found that the complaints of the patients were the best guide towards his employment and that elaborate hemodynamic studies to determine the integrity of the myocardium or the coronary circulation are not necessary. In fact no single physical finding or test can be a diagnostic guide in regard to when a patient may return to work. If the heart is not enlarged, there is no angina on moderate effort or distressing dyspnoea, and no arrhythmia develops or is present, the probability that such a patient may return to useful work is very good.^{4, 5, 6}

Nevertheless exact studies to establish the energy

expenditure by workers during their operations have proved of the utmost importance to help establish the rationale for work by the cardiac.⁷ Out of such work has come an important finding that work is not continuous but intermittent. Most domestic, recreational and industrial activities are almost always intermittent requiring bursts of energy followed by relatively quiet periods. This is why most exercise tolerance tests may be misleading. It is true that if a person passes well the usual exercise tolerance test he certainly can engage in gainful activity. But even if he does not pass an exercise test satisfactorily such a patient may still be able to engage in work of an intermittent nature in which the bursts of energy expenditure are of shorter duration than what is expended during the exercise test. For example, the workers found that the Master 2 step test or treadmill exercise involve energy expenditure as high as 8.5 calories per minute. The peak load for cardiacs during certain operations is no higher than 3.45 calories per minute. It is true that different jobs required different patterns of energy expenditure. Some with low rate of energy expenditure but steadily maintained, while some with high peaks of energy expenditure alternating with inactive periods. The majority of jobs were found to parallel the first type in which patients with coronary heart disease expended but 1.84 calories per minute. The significant outcome of such studies indicated that patients with compensated heart disease are not compelled to make any greater demands on their reserve in terms of pulse rate, pulmonary ventilation or oxygen utilization in order to perform this type of factory work than are their healthy co-workers. It appears quite possible that overcaution has been the rule in regulating physical activity.

The decision to return a patient to work must take into account not only the effects of the work upon the cardiovascular system but also that the patient at home without further restriction probably will not reduce his energy expenditure below that required by work. Frequently the detrimental effect of the psychological and emotional stress of a patient after ill-advised activity restriction is actually greater than that due to the cardiac involvement itself. There is also little doubt that emotional and personal problems may be aggravated by inactivity thereby increasing the energy expenditure. It may be accepted as reasonable, that such problems are seldom solved by keeping a worker idle.

The question is often raised as to what the effect of competitive industrial activity is on the diseased heart. Does work damage further the severely disabled cardiac patient. If it did not, we would be a long way towards answering the more general ques-

tion as to whether industrial activity or intermittent activity can lead to progressive deterioration of cardiac reserve. The search for an answer to this important question was the basis of a study by Slipyan.⁸ This intrepid investigator undertook to discover the effects of work on severely disabled cardiacs. He found that the problem of anginal attacks was remarkable in several respects. Four out of five persons who had anginal attacks were definitely improved in spite of an increase in their physical activity. One 62 year old man had not needed a nitroglycerin pill for three months since he went to work. Another who took fifteen nitroglycerin pills a day before work had only taken six in three months. A third who took thirty nitroglycerin pills a day before work takes only three since working. His conclusion is that occupational activity does not necessarily lead to progressive heart disease or deterioration of the physical condition of the patient. As a matter of fact he found that a substantial number of patients with cardiac disease actually show improvement while in an employed status. It would appear that elimination of fear and removal of anxiety is a major problem to be faced both by the patient and his physician. Further that through rehabilitation these two serious burdens are lifted from the cardiovascular system freeing the patient to expend his energy in more useful pursuits.^{9,10}

If the doctor has determined that the patient can return to work and the patient is ready to return, it is still necessary for Industry to be ready to absorb the workers. At the present time employers are still reluctant to hire persons with cardiac disease. The various reasons for such a policy seem all to come down to unwillingness to risk momentary loss arising out of compensation claims. It is maintained (a) that physical demands of the work will exceed physical capacity of the patient. With knowledge of actual energy cost of the work involved it should not be too difficult to determine whether the job is suitable for the worker and whether the energy cost in calories is well within the patient's means. (b) Cardiac patients may be a heavy burden on a company sponsored insurance program. This is due to the fear that Judicial interpretation of the Workmen's Compensation Act may be prejudicial to the insurance carrier and may have acted as a deterrent towards re-employment of individuals who have had a myocardial infarction. Another deterrent appears to be union pressure on the administration of Workmen's Compensation Laws which militates against a liberal employment policy in this field. Such pressure it is claimed overburdens employers with claims arising from the onset or aggravation of heart trouble. Nevertheless none of Weiss's patients who had another myocardial infarction or

who developed heart failure claimed that it was due to their work and hence compensable. Some employers plead an insufficient medical staff while still others merely pass off the problem of hiring cardiac workers by claiming it is not in accordance with the policy of the personnel department. It is clear that there is an urgent need to re-examine the validity of some of our present concepts, practices and prejudices on employment of persons, even those severely disabled by cardiac disease not to speak of those who are recovered and in relatively good health. At least one industry, Abilities Inc., has flourished with such workers and its assets have grown from Eight Thousand Dollars in 1952 to over a million now. It is time for a considerable revision of our thinking on the ability of cardiac patients to resume and continue in gainful work.

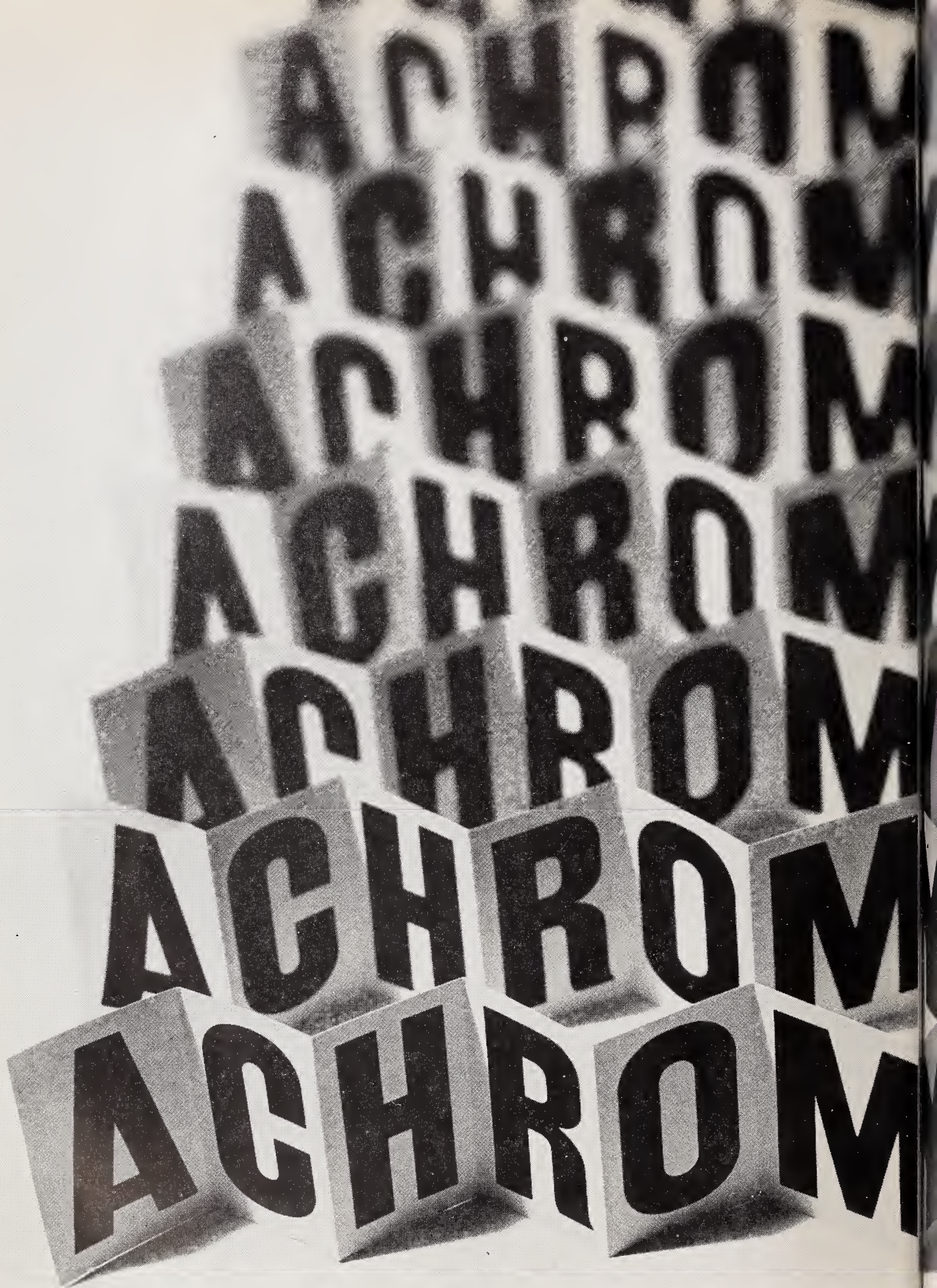
Using actual energy cost as a yardstick the physician can gain some idea of the effort inherent for the patient in various activities of work or recreation. Work ratings based essentially on oxygen uptake per minute during a task are now available. They cover situations in occupations, house-work, recreation and self-care, and even such efforts as are involved in the use of a bed-pan.

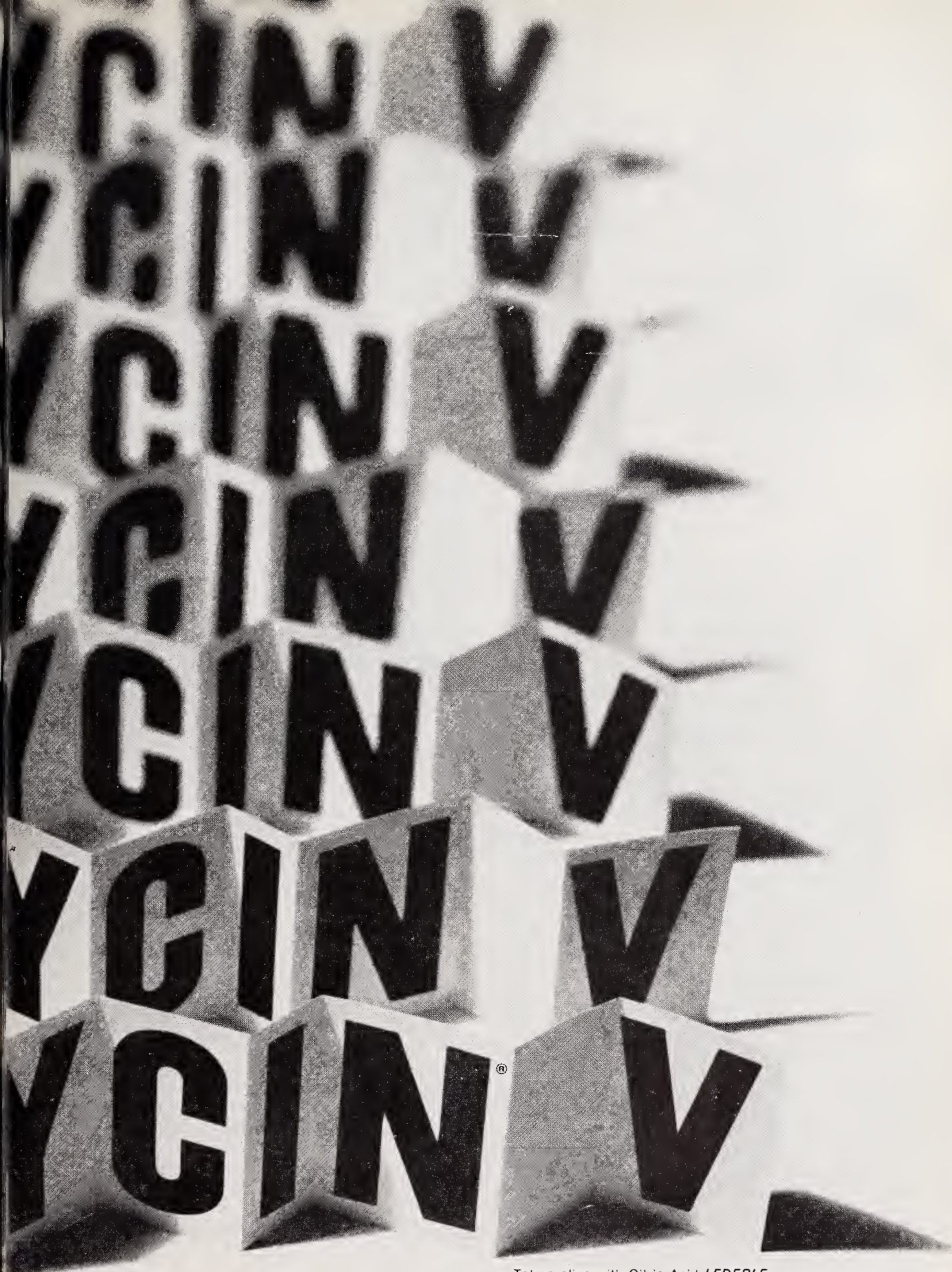
The physician having at his disposal information about work demand and work capacity will be on surer ground in regulating, advising and restricting the patient's activity. The result must be to further the patient's well being as well as his activity.

L. H. N.

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Connecticut State Medical Society

Speaker of the House of Delegates

Few men can develop parallel careers, with outstanding success in both. Yet this has been the case with Dr. Thomas Michael Feeney, one of Hartford's leading urologists, who is also one of Connecticut's leaders in medical organizational work. Born in Boston, Massachusetts July 22, 1910, Dr. Feeney received his academic training at Boston College from which he was graduated in 1932 with a Bachelor of Arts degree. In 1936 he received his Doctor of Medicine degree from Boston University Medical School.

At that point he came to the St. Francis Hospital in Hartford as an intern, serving for one year in that position and then moving on to a residency in pathology the following year.

In 1938 Dr. Feeney began his two year surgical residency at Boston City Hospital and followed that with a urological residency. By this time he had decided that he would live in Hartford. He thereupon applied for a license to practice medicine in Connecticut, receiving it in July of 1940.

In 1941 Dr. Feeney became a member of the Hartford County Medical Association, the Connecticut State Medical Society and the American Medical Association. Two years later he entered the Navy, serving as a Commander in the United States Naval Reserve until 1946 at which time he was returned to civilian life. However, during his naval service, Dr. Feeney was certified by the American Board of Surgery in 1944. In 1950 he was also certified by the American Board of Urology.

By 1949 he had given evidence of his ability and desire to work in organized medicine. At that time he was elected secretary-treasurer of the Hartford County Medical Association, a post which he filled until 1953.

During that time he was responsible for sparking the creation of an executive secretary's position. Dr. Feeney then served on the Board of Directors of the county medical association as a member-at-large until his election to the vice presidency in 1954 and the presidency in 1955. He then served again as a member-at-large until the spring of 1958.

During this time Dr. Feeney was also participating in various committees of the Connecticut State Medical Society and as vice-speaker of the House of Delegates. He also served a term on the Professional Policy Committee of the Connecticut



THOMAS M. FEENEY, M.D.

Medical Service. In addition, he was Chairman of the Liaison Committee with the State Bar Committee, organizing the first meeting of the medico-legal group in the state.

At present, as Chairman of the Council and Speaker of the House of Delegates, he occupies one of the three key positions in the State Medical Society's echelon of command. Dr. Feeney is responsible for the selection of special committees, reports, activities, and the channeling of administrative, professional and executive procedures.

Besides his busy life for the State Medical Society he is also attending urologist at St. Francis Hospital, assistant attending urologist at McCook Memorial Hospital, the city hospital maintained by Hartford, and consultant to the Manchester Memorial Hospital and to the Veterans' Home and Hospital at Rocky Hill. He also served as Chairman of the Executive Committee of St. Francis Hospital in 1952. He is both a member of the Hartford Medical Society and of the American Urological Association, New England branch.

Dr. and Mrs. Feeney live in West Hartford, enjoying their family of four children.

J. RICHARD LENEHAN, M.D.

FROM THE SECRETARY'S OFFICE

WILLIAM R. RICHARDS, M.D., *Executive Secretary*

James G. Burch
Director of Public Relations

160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

Josephine P. Lindquist
Assistant to Executive Secretary

Secretary's Report

After eight months of serving as your Executive Secretary, it is rather difficult for me to evaluate what I may have done for the Society, but I can readily tell you what the Society has done for me.

There have been concerted attempts made to get doctors to participate more actively in medical affairs over and above those of a purely scientific nature. At the outset, I felt like a hypocrite in suggesting that it was the duty of every physician to so participate, since my own past record in this regard had been so poor.

But of this I can assure you today—that I have mended my ways; that I have participated most actively; and that, like peace, it's wonderful! I can heartily recommend the experience to all members of the Society as being a most rewarding and stimulating one.

To carry out the duties of the Secretary's post on a part-time basis has not been an easy task. It has required a considerable amount of time and effort to do an adequate secretarial job and simultaneously conduct a private obstetrical practice. I can assure you, however, that the members of your Council and other devoted members of the Society have made equal, or greater, efforts and are deserving of much credit for their outstanding service, especially during the trying months since the House of Delegates met in April of this year.

I should like, at this point, to voice my deep appreciation to the members of the Secretary's office staff; not only to Mrs. Lindquist and Mr. Burch, in particular, but to all the others who have given efficient and loyal service to the Society. Without their able assistance and cooperation, it is quite likely that things might have come to pretty much of a standstill during the early days of my period of indoctrination.

I am sure all of you will share with me a feeling of deep sympathy in knowing that Dr. Creighton Barker became seriously ill shortly after his retirement in July and is still in a very poor state of health. Over a period of many years, this is one of very few regular meetings of the House of Delegates at which he has not been present. I would appreciate a direction from the delegates assembled here today to inform Mrs. Barker that Creighton is missed and that we send him our sincerest wishes for complete recovery.

During these eight months, I have been able to do very little scientific reading but I have been gradually absorbing a liberal education in the fields of medical legislation, medical economics and medical sociology. I should like to present for your consideration the cumulative impression which I have gained and informally offer to you what seems to me a proper and reasonable attitude for doctors to hold at a time in which medicine is under pressure from many sources.

Whatever their personal party affiliations may be, Connecticut doctors have traditionally avoided partisan political action, either as individuals or through their medical societies. It can be safely said that the average physician is poorly qualified to engage in politico-economic affairs. His scientific interests, his medical training, and the direction and purposes of his thinking are such as to make distasteful to him the thought of actively seeking legislation which might bring him selfish advantage or material gain. As a consequence, he has always been content to offer only spasmodic opposition to such legislative measures as have appeared to him undesirable in terms of sound medical practice. Today, mere opposition to the proposals of others will not be nearly enough! On the political front and on the labor front, heavy artillery is being wheeled into position for the avowed purpose of launching an economic and legislative bombardment on the private practice of medicine, the voluntary hospital system and the health insurance industry, including the Blue Cross and Blue Shield plans. There can be no mistaking the intentions of the people behind this attack. Socialized medicine is their goal.

The wish of the typical medical man is to be left alone; to be allowed to look after the health of his patients, strive constantly to improve his diagnostic and therapeutic skills, and provide economic security for himself and his dependents according to his own ability to do so. He asks for no discriminatory laws to be passed in his behalf. With all other citizens, he shares the problem of coping with the appalling increases in the cost of living and has been uniquely successful in holding the line in the matter of his own charges for service.

But the doctor can no longer hope to live in a vacuum and practice medicine in an ivory tower. By now, he must be aware that there are power-

ful social forces on the march which aspire to gain economic control of his professional abilities in order to sell them to the public much as if they were groceries or home furnishings. His patients are to be known as "consumers of medical care". The saving of a life is to be recognized only as an item of "professional service", assigned a code number, and given a certain dollar value in a "schedule of payments".

His efforts to resist this unwarranted encroachment on his personal and professional freedom are being labelled reactionary and inconsistent with modern, liberal, social thinking. It is charged that he does not hold a proper concern for the public interest and it appears that it will be soon forgotten that the medical profession first initiated voluntary health plans to provide prepayment for hospital and physicians' services. That these plans are doing a good job is clearly demonstrated by the fact that in Connecticut today, Blue Shield and Blue Cross alone are offering practically complete payment of medical bills to over half the people in the state, and the private insurance carriers are offering comparable coverage to many thousands of others.

Voluntary plans, which have expanded so rapidly in recent years, constitute the doctor's most powerful weapon with which to discredit the philosophy of those who advocate discriminatory closed panel clinics, compulsory national health insurance and other plans which must eventually lead to the socialization of medicine.

Under a sound voluntary system, citizens need not surrender yet another of their precious freedoms to bureaucratic control. It is in no sense reactionary to foster the idea that the voluntary way is the American way and that the public interest is best served by the assumption of individual public responsibility. Each citizen must assume his proper share if he is to remain free. Socialism is a philosophy of government entirely foreign to our way of life and to the traditions handed down to our forefathers. Few candidates for public office have dared to stand on a socialist platform, because Americans cherish the system which has brought them the highest standard of living in the world while preserving the greatest possible degree of personal freedom. They are well aware of the national bankruptcy, the diminished productivity and the loss of incentive which Socialism has brought to those countries which have embraced it, sacrificing individual freedom in the hope of obtaining collective security.

The total cost of medical care in the United States in 1957 was fourteen billion dollars, a staggering sum. Of this amount, about one-third was paid by health insurance plans which everyone

agrees is too small a part. This means that the remaining ten billion dollars came directly out of American pocketbooks but it is the honest opinion of the medical profession that since the quality of medical care in this country is the very best in the world, every cent of it should be considered money well spent. In terms of the prevention of disease, the relief of suffering, and the preservation and prolongation of life, the value received by the average wage earner from these medical care dollars was certainly as great or greater than that he received from the ten billion dollars he spent for home improvements in that same year; or from the twelve billion dollars he spent for liquor, cigarettes and cosmetics; or from the countless additional billions he spent for other luxuries, let alone necessities.

But the social planners nevertheless contend that the cost is too great and that the only reasonable thing to do is to saddle the government with the complete operation of this essential service. Their purpose, it must be assumed, is to thereby reduce the cost of medical care. Now our federal government has known many hours of greatness in coping with momentous domestic and international problems. More often than not, our leadership has been of the highest quality irrespective of which political party enjoyed a majority. But in the memory of most citizens now living, our government has seldom demonstrated any particular skill in conducting its business operations economically. The magnitude of the national debt speaks for itself and the unbalanced budget is always with us. Despite high and confiscatory taxation, a multi-billion dollar deficit is anticipated again for the coming fiscal year. Yet it is the government to which the socializers would turn over the complete management of the nation's health affairs. "Let the government take it over," they say, "and then every citizen will receive free medical care from the cradle to the grave." To which we must reply, "Free, indeed!"

It is clear from the record that it is unreasonable to conclude that such a system of compulsory national health insurance would cost us less, and there is a distinct probability—almost a certainty—that it would cost us more. Let the already overburdened taxpayer consider that it would be necessary to make much greater deductions from his paychecks than at present and to extract at least equal additional amounts from his employer in order to collect the fourteen billion dollars or more in tax revenue with which to administer the program. And it should always be kept in mind that the shabby substitutes for private medical care, which have been foisted on patient and doctor alike under systems of bureaucratic regulation else-

where, have cost the people more, rather than less, in money and have given them in return, inferior, rather than superior, health services.

It must be made clear by each physician to all who will do him the courtesy to listen, that he and his colleagues oppose such plans primarily because they must inevitably provide all patients with poor medical care, thereby lowering our national standard of health; because the replacement of voluntary health insurance with compulsory health insurance will not reduce the total cost of medical services one iota but will unquestionably increase it.

It must be proposed, instead, that patients and doctors cooperate in an effort to strengthen exist-
the voluntary plans. They must both understand that the highest quality of medical care costs money a very great deal of money—and that no amount of labor-management bargaining over health insurance as a fringe benefit can alter that fact. The subscriber is entitled to realistic coverage of all his medical expenses and the doctor, in turn, is entitled to realistic compensation for his professional services rendered. Low premiums must not be made possible through the medium of cut-rate fee schedules nor by threatening the physician with compulsory regulation if he does not accept such schedules willingly. If these two parties adopt a reasonable attitude in the matter, the third parties which offer such plans for sale will have little difficulty in developing better and more comprehensive contracts which will be satisfactory to all concerned. The adoption by physicians of relative value scales might prove to be of aid to private insurance carriers in the development of their plans without granting them the "Service Benefit" provisions which are at present an exclusive feature of Blue Shield contracts.

There is one particular obstacle which may tend to hinder the expansion of this program. Almost everyone likes the idea of having adequate health insurance coverage but few really wish to pay for it. Through the medium of high-powered advertising and super-salesmanship, it has been made to seem far more desirable to spend money for items which provide pleasure and convenience than for those which provide protection and security. Luxuries are represented as necessities so that no matter how fancy or expensive an article may be, it is convincingly made to appear that no self-respecting family can possibly get along without one. In the face of such fierce competition for the wage-earner's dollar, it is difficult to make health insurance seem equally desirable and it will require a forceful program of public education to accomplish this end. An attempt must be made to restore to the consumer's mind a reasonable sense of values;

that, in terms of their relative importance, the cost of purchasing medical treatment of a major illness is not out of line with the cost of purchasing a major electrical appliance; that, in terms of service, the fee paid for a visit from one's physician should not necessarily be less than that paid for a visit from an appliance repairman.

But all this has dealt rather exclusively with the dollar aspects of medical care. It is the other side of the picture which is of even greater concern to Americans and their physicians.

There has never been any political or economic attack on the doctor by his patient, nor is there now. In his consultation room, the physician hears no complaint about the quality of the medical care he renders. He receives no impression or expression of any desire, on the part of those who seek his services, to exchange the free practice of medicine for a socialized system.

There is no demand from the general public for the control of medicine by the government or other non-medical agencies. The demand for such control comes largely from certain politicians and so-called "labor leaders" whose views are always liberal and sometimes radical. There are many reasons to doubt that the views of these men necessarily reflect the thinking of the average citizen. In far too many instances, it would appear that the personal opinion of the individual is not asked for and, if offered, is conveniently ignored by those who presume to speak for him.

But regardless of political, professional or union affiliation, all of us reserve the right to think for ourselves, and it cannot be ignored that the free patient cherishes the right to choose his own doctor and would be highly incensed if it were to be denied him. Medicine is an art as well as a science and it is important that one's physician be a friend and a confidant as well as a healer. Let the social planners not write off free choice of physician as a matter of little consequence!

Our existing system of medical care has proven to be a good one. It has proven productive of better health and longer life for more people than any other in the world. It has been progressive in the development of new methods by which to prevent disease and to cure previously fatal ailments. All this has been accomplished without controls except those imposed upon its members by the profession.

Up to now, physicians have made inadequate attempts to influence the thinking of those who are presumed to be expert in matters of national policy and particularly in the relationships between management and labor. They have taken no sides when the latter engage in periodic combat across the bargaining table. Regrettably, the com-

pliment of this "hands off" policy is not being returned to the medical profession by the participants in this apparently never ending struggle. So, in the interests of averting for America, the catastrophe which has befallen other nations who have adopted socialistic medical systems, let each physician acquaint the public, and especially the elected representatives of the public, with what has happened to the patient and his doctor under such systems.

Let them know, for example, that in all of England there has not been a single new hospital built in many years; that existing buildings are in a sorry state of repair; that equipment is obsolete and inadequate. All this because socialism is bankrupt of money.

Inform them too, that despite the coverage of all Britons by National Health Service, the purchase of voluntary plans is increasing by leaps and bounds due to growing dissatisfaction with the many inadequacies of the government controlled system. This because socialism is bankrupt of results.

Let them know that whereas in this country, medical schools must turn away more applicants for admission than they can accept, in England opportunities to study medicine go begging and the educational qualifications of those who do apply are sub-standard. This because the lot of the doctor has become such a sorry one and because socialism is bankrupt of incentive.

Remind them that in years gone by, American physicians went abroad to study because the great advances in medicine were being made there. Today, foreign doctors come to the United States to learn since the free system has made this country the center of medical progress. This because socialism is bankrupt of productivity.

Point out to them that the supposed demand for the socialization or other bureaucratic control of the practice of medicine is being created by pressure groups who have no basic interest in what is best for the individual patient and the physician of his choice but whose primary interest is in using health insurance as something to bargain for along with retirement plans, portal to portal pay, and similar benefits which are perfectly proper to seek through negotiation as long as their attainment does not have an unfavorable or discriminatory effect on other segments of society. Socialism must apply to all if it is to apply to any. Let it apply to none!

In recent times, increasing emphasis has been placed on the health needs of the aging—the senior citizens, as they are now known. Largely due to constantly improving medical care, longevity has increased some ten or twenty years since the turn

of the century, and it is estimated that there will be more than fifteen million Americans over 65 years of age in the foreseeable future.

Despite the fact that many of these people continue to enjoy excellent physical and mental health and are capable of undiminished productivity, our social system urges them to put an end to their work and retire to become beneficiaries of Social Security.

Under a sort of all-or-none law, they are being represented as a semi-indigent group, a representation which, if true, indicates general inability of the social security system to keep up with inflation, rather than a specific inadequacy in regard to voluntary health coverage. Discouraging individual and family responsibility, those who favor compulsory plans are maintaining that all recipients of social security payments, *and* their dependents *and* their survivors, must also be provided with hospital, medical, surgical, nursing home and dental care, under government control and at government expense. This is the essence of the Forand Bill, which proposes to provide this care to those who need it on these terms as well as to those who do not.

Accurate figures on the number of people over 65 who are unable to support themselves are not, at the moment, available. However, there always have been several millions of our elders who cannot possibly provide themselves with food, shelter or clothing, let alone medical care. If these unfortunates have no relatives who will help to look after them, they must be supported by public agencies, preferably on the local or state level.

A second group, probably accounting for several additional millions, are financially secure and neither need nor desire federal assistance in any form.

It would seem likely, however, that the great majority of these people fall into an in-between group. They have social security or other modest retirement income but may well find it a hardship to provide for medical care on a continuing annual prepayment basis. How can the health needs of this majority best be fulfilled?

By the proposals of the Forand Bill, possibly. But there are better, more equitable and more economical ways to accomplish this, which, it would appear, the voluntary plans could and should develop. A restricted contract, eliminating many medical services not likely to be required by older people, could be made available at reduced cost to those over 65 years of age who have a reasonable degree of financial independence.

For those less fortunate, if there were to be a rejuvenation of the now rather unfashionable concept of family responsibility, a similar low-cost

contract could be purchased by devoted children either separately or perhaps under a family plan at a modest increase in the annual premium. By a modest increase in premium is meant an actuarially sound increase because, unlike government service agencies such as the postal system, the voluntary plans must realistically relate the cost of contract to the cost of operation.

For future consideration, it may well be that paid-up health coverage contracts can be developed, similar to paid-up life insurance and annuity policies, which would make it possible that, after ten, twenty or more working years as a subscriber, complete health services would be assured after retirement and for the duration of life without further payment of premiums.

Yes, physicians must give increased support to voluntary health insurance plans, participate more actively in establishing their medical policies and practices, and encourage patients to subscribe to them. For only if these plans flourish can we make good the claim that, given a choice, Americans will always choose to pay their own way and thereby retain their freedom.

Since the main body of this report was completed, several weeks ago, the Secretary was asked to review a currently publicized book, titled "The Doctor Business." To his consternation, he found that much of what he had written, and considered to be reasonably original, was not original at all but had been written many times in the past in telling the physician's side of this story; that the economic attacks being made on doctors today are not unlike those which were being launched yesterday; and that the views expressed in this report have been expressed before, and undoubtedly better, by countless other physicians in countless other years.

Your Secretary's ego has been properly deflated but his conclusions are not only unchanged but have been immeasurably strengthened by the knowledge that, despite changing times, the considered social opinions of our predecessors in the healing arts are practically as sound in 1958 as they were in decades past. Basic principles always remain the same and are worth re-stating, often and with vigor.

The official representations made in behalf of all doctors by their state and national medical organizations are of great importance, but it is of even greater importance that each individual physician be convinced of the truth and wisdom of such representations. It must be made impossible for anyone to justifiably contend that the elected officers of the medical profession have the power to express views which are contrary to those of the majority of the entire membership.

The busy practitioner has little time to devote to this necessary program of public education and possible political action, but he must somehow find the time. He cannot continue to "let George do it". Few laymen will actively support his cause if he does not plead it himself, with sincerity born of conviction. At certain times, silence is golden, but this is not such a time.

WILLIAM R. RICHARDS, M.D.
Executive Secretary
Connecticut State Medical Society

COUNCIL MEETING

Thursday, November 20, 1958 — 3:30 P.M.

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 3:30 P.M. on Thursday, November 20, 1958. Present in addition to the Chairman were Doctors Russell, Weise, Polito, Richards, O'Connor, Gallivan, Weld, Scully, Davis, Gens, Clarke, Kennedy, Buckley, Blodinger, Archambault, Ottenheimer, Eddy, Seigle, Grendon, Gardner, Rentsch and Gilman. Absent were Doctors Carter, Schiavetti, Starr and Hughes.

APPOINTMENT OF A COMMITTEE ON HEALTH CAREERS. Harry C. Knight, Chairman of the Subcommittee on Health Careers of the Public Relations Committee, presented the Council with information regarding the great need for increased personnel in all phases of the health field and that the purpose for the "Health Career Program" is to interest students at the high school level in the various opportunities for positions in medicine and the allied arts. He explained that while other agencies such as the Connecticut League for Nursing, the Connecticut Hospital Association and the Connecticut Society of Pathologists were conducting individual recruitment programs in their own areas, none of these had the general impact of a health careers program such as the Public Relations Committee was sponsoring in cooperation with the Woman's Auxiliary of the Society. Dr. Knight then formally requested that the Council appoint a special conference committee of the State Medical Society to conduct this program and authorize the committee to meet jointly in an advisory group with the other agencies previously mentioned.

It was VOTED that the Council appoint a special committee on Connecticut Health Careers and to instruct this committee to draw up a plan of operation and organization, such plan to be submitted to the Council for approval. Dr. Knight recommended the following committees: — Dr. Knight, Chairman, Bernard F. Mann, New Haven, Henry Eisenberg,* Hartford, Winfield O. Kelly, Norwich and Arnold Janzen, Hartford. It was VOTED to appoint this committee as recommended. *pending membership.

AMEF ASSESSMENT PROGRAM. Doctors Dobbs and Jacobson informed the Council of their experiences in attempting to obtain AMEF contributions on a purely voluntary basis. They pointed out that in some areas of the state, the voluntary program worked very well but in the over-all picture, Connecticut was not making a realistic contribution to the AMEF Fund. An assessment program in association with State Medical Society dues has been adopted by some seven states and in addition to increasing the amount of money available for AMEF purposes, there had been noted an unexplainable secondary reaction that individual contributions were increased with this plan. In conclusion a resolution was offered to the Council for consideration with a recommendation that it be approved. After consideration of the original resolution the Council VOTED several changes and amendments and then VOTED the adoption of the AMEF Resolution as changed and amended for submission to the House of Delegates for action. The amended resolution follows:

"Whereas, The American Medical Education Foundation was created to help meet the annually recurring deficits of our medical schools, and to provide such other financial assistance as may be necessary, and

"Whereas, The American Medical Education Foundation has demonstrated by its continued increase in growth that it is contributing substantially to meeting our medical schools financial needs, and

"Whereas, The American Medical Education Foundation is meeting with increased acceptance by the American physician, and

"Whereas, The financial plight of our medical schools is a proper concern of organized medicine as evidenced by the fact that at least eight state medical societies have adopted AMEF dues increase programs, and

"Whereas, The dues increase program has proved to be the simplest, least expensive, and most successful method of raising funds in behalf of AMEF, be it hereby

"Resolved: That the Connecticut State Medical Society adopt a dues increase program for AMEF, and increase its dues \$15.00 per annum, with each member reserving the right of assigning his (her) dues increase to the medical school of his (her) choice; and with each member further reserving the right to omit the payment of his (her) portion of the dues if he (she) so desires."

APPOINTMENT TO COMMITTEE ON MENTAL HEALTH. A letter of resignation from a member of the Committee on Mental Health, Francis J. Braceland, was read and it was VOTED to accept Dr. Braceland's resignation with regret.

On recommendation of John Donnelly, Chairman of this Committee, Robert S. McKnight of Hartford was appointed to the Committee.

REPORT OF SUB-COMMITTEE TO STUDY ORGANIZATION AND OPERATION OF JOURNAL. By invitation, Louis Nahum, Chairman of this Sub-committee, presented a progress report. The basic considerations included in Dr. Nahum's report were (a) That an additional Literary Editor, to be known as the Assistant Literary Editor, be a physician and annually elected by the House of Delegates. The Assistant Literary Editor should be a member of the Editorial Board and function as Vice-Chairman of the Board. A change in the present by-laws would be required to provide for the election of an Assistant Literary Editor. (b) That the Managing Editor appoint an assistant, not necessarily a physician, who would serve in the capacity of business manager, such appointment to be approved by the Council and apparently requiring no change in the by-laws; that the definitions of the functions of the Literary Editor and Managing Editor needed revision and that at a later date, but prior to the next annual meeting of the House of Delegates, this committee submit clarification of the by-laws in this regard and request amendment of the by-laws.

It was VOTED to acknowledge this progress report. Dr. Nahum was informed that it was the opinion of the Council that the purpose of the Journal should be for information of the members of the Society in all fields applying to medicine in addition to its purely scientific aspects and he was advised to submit his recommendations for by-law changes to the Sub-committee to Study and Revise By-laws for consideration.

JOURNAL AUDIT. The audit of the Journal finances as requested by the Council on October 29, 1958 for the six month period May 1, 1958 to October 31, 1958 was accepted for information.

EMPLOYMENT OF FULL-TIME EXECUTIVE SECRETARY. Dr. Feeney presented a progress report of the initial considerations of this committee. The principle point which has been discussed thus far is whether or not the full-time Executive Secretary should be a physician or lay person. No final conclusion had been reached on this basic point and it was requested that members of the Council who had opinions in this regard, submit these to the Chairman. The committee plans to meet again prior to the next Council meeting.

EMPLOYMENT OF A LOBBYIST. Dr. Feeney reported that he had met with the Committee on State Legislation for the purpose of developing a workable program of action to be conducted at the forthcoming meeting of the General Assembly. The planning as developed to this point does not include the representation of the Society by a registered lobby-

ist. The general feeling is that medical representation is more desirable in many respects and that a number of physicians would have to be asked to appear at the hearings rather than a single representative. The committee proposed to ask the Commissioner of Health to attend its meetings with the view of obtaining his advice as to which bills were basically important and require a specific stand or which will not require such a stand. Doctor Burgdorf volunteered to be of all assistance possible but had declined to represent the Society on a formal basis.

A plan is under consideration to request the component county associations through their appropriate committees to become familiar with representatives from their area in the General Assembly and make efforts to discuss medical problems with these representatives locally rather than at Hartford.

It was suggested that if the Committee felt that changes in the by-laws were necessary to improve its function, that such recommendations be referred to the Sub-committee to Review and Revise By-laws.

CONNECTICUT MEDICAL SERVICE. Dr. Feeney reported on the progress made at the last joint meeting of the Executive Committee of CMS and the liaison committee of the Society. He stated that the by-law provisions which will outline composition and function of a Medical Advisory Board has been practically completed. This committee, as previously indicated, is to be substituted for the present Professional Policy Committee. In broad outlines, the committee will be composed of twenty-three members, fourteen of which will be nominated by the county associations on a proportionate basis and the additional nine members will be nominated by the CMS Executive Committee and the Society's liaison group.

Dr. Feeney also described the progress of by-law changes which will make possible regular meetings between the Executive Committee of the CMS Board and the Council. This liaison committee will serve essentially the same function as the present negotiating sub-committee in advising the CMS Board as to medical matters and reporting on such meetings to the Council.

Other matters which were discussed were: (a) The attitude of the Board of Directors toward the C.I.O. resolution which was incorporated in the minutes of the October 29, 1958 Council meeting. The Board of Directors are giving considerable thought to this matter and will apprise the Council as to how it plans to proceed. (b) The Board reported that it had been approached by representatives of General Motors factories in Connecticut who were seeking a different contract from CMS which might provide their employees with benefits similar to those arranged for by the parent company

with Michigan Medical Service. Since this request contained a deadline of January 1, 1959, the conclusion was that a new contract could not be developed and issued until it had been processed by the eight county associations and approved by the House of Delegates. (c) The Board announced receipt of a request from the Chiropodist Society strongly urging that CMS pay benefits for services rendered by chiropodists. There was considerable discussion on this matter and the sub-committee expressed general disapproval but felt that a definite decision in this regard was the responsibility of the Board of Directors of CMS.

Once the by-laws have been drawn up in final form and become official, it is planned that the membership of the Society will be provided with a copy of all changes. Further meetings are planned.

ELECTION OF STUDENT MEMBERS. It was VOTED to elect six student members. (List follows.)

PURCHASE OF OFFICE EQUIPMENT. Upon recommendation by Denis O'Connor, Managing Editor of the Journal, it was VOTED to appropriate the sum of approximately \$385 from the Russell Fund with which to purchase an electric typewriter.

REPORT OF SPECIAL COMMITTEE TO CONTINUE TO STUDY PREPAYMENT PLANS. The final report with conclusions and recommendations of the Special Committee to Continue to Study Prepayment Plans was presented to the Council by Ellwood C. Weise, Sr., Chairman. It was VOTED to accept this report for presentation to the House of Delegates.

DISTRIBUTION OF HEALTH INSURANCE COUNCIL PAMPHLET. A communication from Max Alpert, Chairman of the Committee on Third Party Payments, was read, informing the Council that his Committee had approved the distribution to the membership of the Society of a Health Insurance Council pamphlet called "Simplified Claims form" and an accompanying letter and recommending that the Council approve the decision of his Committee. It was VOTED that the Council authorize the Health Insurance Council to distribute this pamphlet with the accompanying letter providing the Health Insurance Council will pay all expenses of such distribution and be permitted to use the Society's addressograph at the customary charge.

REPORT OF DELEGATES TO AMA. Stanley B. Weld inquired as to whether or not the report of Delegates to the AMA is to be an item on the agenda for the House of Delegates meeting of December 11, 1958. He was informed that the AMA Delegates report will be on the agenda for the forthcoming meeting.

COMMITTEE TO STUDY ORGANIZATION AND OPERATION OF THE JOURNAL. It was VOTED that Stanley B. Weld, Hartford, be appointed as an additional member of the Committee to Study Organization and Operation of the Journal.

COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES. It was VOTED to invite Oliver L. Stringfield, Delegate to the Council of New England State Medical Societies to attend the next Council meeting for the purpose of reporting several matters of business which were transacted at the November 5, 1958 meeting of that Council.

DATE FOR NEXT MEETING. It was VOTED to delegate the Chairman and the Executive Secretary to set the date of the next meeting of the Council.

Student Members Elected

Harold A. Bergendahl, Jr., Norwich, Tuft's University School of Medicine, Class of 1962.

Thomas M. Malloy, Stamford, Tuft's University School of Medicine, Class of 1962.

Carter L. Marshall, New Haven, Yale University School of Medicine, Class of 1962.

Anthony J. Nespole, Jr., East Norwalk, Creighton University, Class of 1962.

Warren R. Pistey, Bridgeport, University of Virginia, Class of 1962.

Fredric K. Cantor, Derby, Yale University School of Medicine, Class of 1962.

Semi-Annual House of Delegates Meeting December 11, 1958

The verbatim proceedings of the semi-annual meeting of the House of Delegates, held at Hartford on December 11, 1958, will be published in a subsequent issue of "Connecticut Medicine".

Meanwhile, for the information of the membership, the following are condensations of the various items received and acted on by the House.

1. INTRODUCTION OF THE PRESIDENT.

Walter I. Russell, President, greeted the delegates and expressed the wish that their deliberations would prove harmonious and productive.

2. REPORT OF THE CHAIRMAN OF THE COUNCIL.

Thomas M. Feeney, Chairman, presented a comprehensive and informative tribute to the "unselfish devotion" of the members and also voiced his appreciation of the assistance of the Secretary's office staff. Progress with CMS negotiations was outlined and described as "cooperative and harmonious."

Dr. Feeney's report contained only one recommendation which was as follows: "... I wish to recommend that this House of Delegates today approves the Preferred Contract (CMS), inaugurated some time ago but as yet not having the formal approval of the House of Delegates."

The House VOTED unanimously to accept Dr. Feeney's report and adopt this recommendation. The Preferred Contract, first sold in 1954, has

therefore been officially approved by the Connecticut State Medical Society.

3. REPORT OF THE EXECUTIVE SECRETARY.

The report of the Secretary, William R. Richards, was accepted and appears elsewhere in this issue of "Connecticut Medicine". A recommendation to inform Mrs. Barker that Dr. Creighton Barker was missed and to convey to him sincere hopes for recovery was adopted unanimously.

4. PRESENTATION OF THE BUDGET.

The 1959 Budget had been submitted to all delegates in printed form and, after discussion and clarification by the Treasurer, Frank L. Polito, it was VOTED to accept the Budget as submitted.

5. REVISION OF BY-LAWS RE COMMITTEE ON MENTAL HEALTH.

The Council's recommendation of a revision of the by-laws pertaining to this committee was presented and it was VOTED unanimously to accept the revision of Article X, Section 3, Paragraph 13 so as to provide a longer term of office (4 years) for members elected to the Committee on Mental Health.

6. CONFIRMATION OF CHANGES IN OFFICERS AND STANDING COMMITTEES.

Several interim appointments made by the Council were presented and it was VOTED to confirm the following appointments:

a. Managing Editor of the Journal. Denis S. O'Connor, New Haven to replace David T. Monahan, Bridgeport, resigned.

b. Delegate to A.M.A. 1/1/59-12/31/60. John N. Gallivan, East Hartford to replace J. Alfred Fabro, Torrington, resigned.

c. Committee on Hospitals. William G. H. Dobbs, Torrington, new member.

d. Program Committee. J. Forbes Rogers, Stamford, to replace David T. Monahan, Bridgeport, resigned.

e. Committee on Mental Health. Robert S. McKnight, Hartford to replace Francis J. Braceland, Hartford, resigned. William Glaser, New Haven, to replace Charles S. Culotta, New Haven, resigned.

7. AMEF RESOLUTION.

It was VOTED by a majority that the following resolution, recommended by the Council, be adopted:

"Resolved: That the Connecticut State Medical Society adopt a dues increase program for A.M.E.F., and increase its dues \$15.00 per annum, with each member reserving the right of assigning his (her) dues increase to the medical school of his (her) choice, and with each mem-

ber further reserving the right to omit the payment of his (her) portion of the dues if he (she) so desires."

The full text of the resolution may be found in the minutes of the Council Meeting of November 20, 1958, published elsewhere in this issue of "Connecticut Medicine".

8. REPORT OF AMA HOUSE OF DELEGATES MEETING, MINNEAPOLIS, DECEMBER 2-5, 1958.

Stanley B. Weld, Delegate to the AMA, gave a full and detailed report of the proceedings of the AMA House of Delegates meeting, touching on such subjects as free choice of physician, relative value scales, prepayment plans, and other matters of great interest. Dr. Weld's report will be published in the verbatim minutes of this House of Delegates meeting in a future issue of "Connecticut Medicine".

At the conclusion of his report, Dr. Weld voiced his thanks to the Society for having been privileged to serve organized medicine in many capacities over a long period of years. The Vice-Speaker conveyed the thanks of the Society to Dr. Weld, accompanied by enthusiastic applause from the delegates.

9. REPORT OF THE SPECIAL COMMITTEE TO CONTINUE TO STUDY PREPAYMENT PLANS.

Ellwood C. Weise, Sr., Chairman, read the report, conclusions and recommendations of this Committee.

The essential recommendations are:

- a. That a Special Committee on Relative Value Study be formed.
- b. That the Connecticut State Medical Society actively support Connecticut Medical Service, Inc.
- c. That the Connecticut State Medical Society encourage assistance and stimulation to commercial insurance carriers to increase participation in the voluntary health movement.
- d. That the Special Committee to Continue to Study Prepayment Plans be discharged.

It was VOTED: (a) to accept the report and adopt the recommendations of the committee; (b) to discharge the Committee with thanks; and (c) to direct the Council to appoint a Special Committee on Relative Value Study at its next meeting, and to outline the purposes which it will be expected to fulfill and its method of operation.

10. NEW BUSINESS.

By consent of the delegates, Mr. Robert S. Judd, Chairman of the CMS Board of Directors, was invited to address the House. Mr. Judd brought greetings from CMS and especially from Mr. J. Edison Doolittle, President of the Board. He expressed great satisfaction with the actions of the

House, with the various reports, and with the progress which has been made between CMS and the Connecticut State Medical Society for the purpose of better serving the public interest as well as the interests of both organizations.

The meeting was declared adjourned by Vice-Speaker Michael R. Scully at 5:30 P.M.

VA Hospitals

Men who have lost the ability to speak or understand language are learning to talk again with the aid of volunteers at Veterans Administration hospitals, VA said today.

These are veteran-patients whose brain injury from wounds, strokes, or other disease has made them unable to coordinate their thinking or associate words with the objects for which the words stand.

Slowly and patiently they must be taught to associate words with things and form sentences to express meaning.

After receiving special training at VA hospitals, housewives, retired military and business men, and other volunteers from the community help the disabled veterans, whose condition is known as aphasia, practice speech each day.

Working under the guidance of specialists in speech, along with the physician and psychologist, the volunteer holds a card with a word printed on it in front of the patient.

"This is something you find in the winter," the volunteer may say. "What is it?"

"S-s-s," the veteran replies, trying to form a word, "S-snow."

At some VA hospitals, a special machine that plays a sound tape on cards is used in speech therapy for patients with aphasia. It shows a picture of an object, speaks its name, and shows the word to the patient on a card simultaneously.

The patient repeats the individual word as clearly as he can and the volunteer listens to his pronunciation and helps him correct it as needed.

Thus through practice and repetition, many VA aphasia patients are helped to overcome their disability.

VA doctors feel volunteers make a valuable contribution in such speech therapy, not only through the actual mechanics of practicing speech but through their personalities which help patients relax and bring out their best efforts.

"A patient overcoming aphasia often gains more confidence from knowing he can talk even slowly and with difficulty to someone from outside the hospital than from communicating with hospital personnel," said Dr. A. B. C. Knudson, VA director of physical medicine and rehabilitation in Washington, D. C.

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SEARLE

Report On Actions Of The House of Delegates American Medical Association Twelfth Clinical Meeting December 2-5, 1958, Minneapolis

The entire summary covering the report on the action of the Minneapolis meeting of the A.M.A. House of Delegates is reprinted in this issue because of the revolutionary attitude which seems to be developing at this high level. It is most important that all members of the Connecticut State Medical Society read and give careful thought to what is contained in this report since discussion and possible action at the county and state level will be in order in the near future.

HEALTH care of the aged, the report of the A.M.A. Commission on Medical Care Plans, osteopathy, expansion of medical education facilities, the Association's administrative changes, the report of the Committee to Study A.M.A. Objectives and Basic Programs, and voluntary health organization fund raising were among the wide variety of issues considered by the House of Delegates at the American Medical Association's Twelfth Clinical Meeting held December 2-5 in Minneapolis.

Dr. Lonnie A. Coffin of Farmington, Iowa, was named the 1958 General Practitioner of the Year for his outstanding contributions to the health and civic affairs of his home community. Dr. Coffin, who is the first Iowan to receive the annual GP award, accepted his gold medal on behalf of "all the men who have dedicated their lives to the general practice of medicine."

Speaking at the Tuesday opening session of the House, Dr. Gunnar Gundersen of La Crosse, Wis., A.M.A. President, called upon the medical profession to exert leadership and imagination in meeting the problems of these changing times. Urging practical actions to solve medico-economic challenges, Dr. Gundersen declared that "the time has passed for policies based on generalities, platitudes and flag-waving." He also suggested that the Association offer support and cooperation to proposals for an International Medical Year.

Governor Orville L. Freeman of Minnesota, who also addressed the opening session, asked for "the help of the leaders of the medical profession in working out a program that will most adequately meet the needs of our older citizens for health care and services of the highest quality."

With half a day still to go, total registration Thursday evening had reached 4,880, including 2,870 physicians.

HEALTH CARE OF THE AGED

Responding to Dr. Gundersen's call for action and Gov. Freeman's plea for help in meeting the health care needs of the aged, the House of Delegates adopted the following proposal submitted by the Council on Medical Service and endorsed by the Board of Trustees:

"For persons over 65 years of age with reduced incomes and very modest resources, it is necessary immediately to develop further the voluntary health insurance or prepayment plans in a way that would be acceptable both to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens.

"Therefore, the Council on Medical Service recommends to the House of Delegates the adoption of the following proposal: That the American Medical Association, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate."

In order to effect the immediate implementation of such a program, the House directed that copies of the proposal be distributed to medical society approved plans, including Blue Shield and private insurance programs, requesting their cooperation.

COMMISSION ON MEDICAL CARE PLANS

The long-awaited report of the Commission on Medical Care Plans, appointed at the 1954 Clinical Meeting in Miami, was discussed for two hours at a

reference committee hearing, but the House decided to defer action until the June, 1959, meeting. In so doing, the delegates adopted this statement:

"We respectfully suggest to the constituent associations reviewing the report in the interim, that their attitude regarding the report will be clarified if they arrive at some decisions in regard to the following basic points:

"1. *Free Choice of Physician*—Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable, and essential to good medical care without qualification?

"2. *Closed Panel Systems*—What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?

"These suggestions acknowledge that the policy of the American Medical Association to encourage and support the highest quality of medical care for all patients remains unchanged. They question, however, whether attitudes toward the free choice of physician and the closed panel system may be undergoing evolutionary change."

The House recommended that the Board of Trustees invite the constituent associations to forward their replies to these questions to the Executive Vice President 60 days in advance of the June, 1959, meeting.

OSTEOPATHY

Considerable discussion centered on a resolution which would have recognized that constituent medical associations have the right to establish the relationship of the medical profession to the osteopathic profession within their respective states. The House decided, however, that the resolution in question did not offer the appropriate solution to the osteopathic problem. Instead, the delegates requested the Judicial Council to review past pronouncements of the House on osteopathy and the status of the laws of the various states in this regard. The Council was asked to present its report and recommendations at the June, 1959, meeting. The House "noted with favor that the American Osteopathic Association has amended its objectives as stated in its constitution by deleting reference to the cultism of Andrew J. Still."

MEDICAL EDUCATION

The House approved a statement by the Council on Medical Education and Hospitals supporting the development of additional facilities for basic medical education, and it urged the entire profession to give that policy strong support in order to correct misinterpretations of the Association's viewpoint regarding the supply of physicians.

"American medicine," the statement points out, "fully recognizes the needs being brought about by the increasing population, social and economic trends, and the changing dimensions of medical knowledge and its application." Urging careful analysis of those needs, the statement says that existing medical schools should consider the possibility of increasing their enrollments and developing new facilities. It also declares that American medicine has the responsibility to encourage the creation of new four-year medical schools and two-year basic science programs by institutions of higher education which can provide the desirable setting.

A.M.A. ADMINISTRATIVE STRUCTURE

A Board of Trustees report on the administrative structure of the Association was approved by the House, which termed the reorganization of the headquarters staff as a long and important step in the right direction. The report informed the House that the Chicago staff has been divided into the following seven divisions: Business Division, Law Division, Communications Division, Field Division, Division of Scientific Publications, Division of Socio-Economic Activities and Division of Scientific Activities. The latter two are still in the process of development and are temporarily under the direction of the Assistant Executive Vice-President. The Board also reported that the Committee on Legislation has been renamed the Council on Legislative Activities, with the Director of the Law Division as Council secretary. This new council will undertake an enlarged, strengthened legislative program, closely coordinated with the activities of the new field staff and the Washington Office. The latter also has been reorganized, with overall direction coming from Chicago.

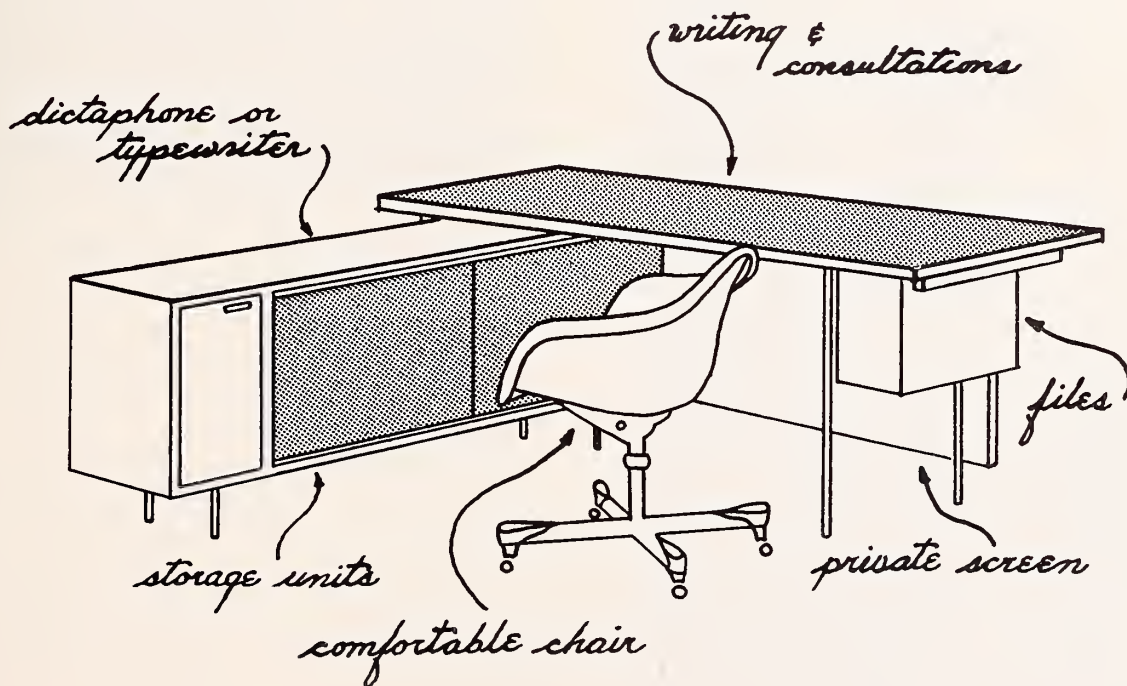
A.M.A. OBJECTIVES AND BASIC PROGRAMS

The House received and commended the report of the Committee to Study A.M.A. Objectives and Basic Programs, which it said may be a significant milestone in the Association's history. In approving one of the committee's recommendations, the House referred to the Council on Constitution and Bylaws the following suggested amendment of Article II of the Constitution: "The objectives of the Association are to promote the science and art of medicine and the betterment of public health and an understanding of the socio-economic conditions which will facilitate the attainment of these objectives."

The House also recommended that the Board of Trustees establish a mechanism which will assume the responsibility for promoting active liaison with each national medical society. "In the scientific fields," the House declared, "the role of the A.M.A.

Continued on page 48

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should be primarily that of leadership, but every endeavor should be made to bring about coordination of the special fields of scientific interest of the other national medical organizations." The delegates also approved a recommendation that the Board of Trustees give serious consideration to opening the publications of the Association to a free and open discussion of socio-economic problems applicable to medicine.

FUND RAISING

Once again considering fund raising problems which have arisen since development of the concept of united community effort, the House passed a resolution which pointed out that the action taken last June in San Francisco has been interpreted by some as disapproving the inclusion of voluntary health agencies in United Fund drives. It then stated that "the American Medical Association neither approves nor disapproves of the inclusion of voluntary health agencies in United Fund drives." The resolution also requested the Board of Trustees to arrange a top-level conference with the voluntary health agencies, the United Funds and other parties interested in the raising of funds for health causes, with a view toward resolving misinterpretations and other difficulties in this area.

MISCELLANEOUS ACTIONS

In dealing with a wide variety of other subjects, the House also:

Took notice of the recent restrictive changes in the *Medicare* program; expressed regret at the substitution of federal facilities for private care in the areas mentioned, and urged the Association to encourage the reestablishment of services under the free choice principle to accomplish the original intent of the act;

Recommended that the Social Security Act be amended by Congress to permit states to combine the present four *Public Assistance* medical programs into a single medical program, administered by a single agency and making available uniformity of services to all eligible Public Assistance recipients in the state;

Authorized the Council on Medical Service to sponsor at the earliest practicable date a *Congress on Prepaid Health Insurance*;

Approved a plan to develop "*Buyers' Guides*" which will be sent to physicians to help their patients analyze the merits of available health insurance programs;

Approved a Bylaw amendment which will allow *dues exemptions* for interns and residents serving

in training programs approved by the Council on Medical Education and Hospitals;

Called to the attention of all individuals or institutions responsible for *intern and resident* training that medical services provided to patients in hospitals are the responsibility of duly licensed physicians;

Encouraged the voluntary registration of the *paramedical personnel* who assist physicians, but opposed the extension of governmental licensure and governmental registration at this time,

Heartily approved and lauded the purpose, content and format of *The A.M.A. News* and recommended continuance of the publication under its present and established policies;

Agreed with the Committee on Medical Practices that *relative value studies* should be conducted by each constituent medical association but not on a national or regional basis by the A.M.A.;

Urged each constituent society to establish a committee on *rehabilitation* to carry out activities recommended by the Board of Trustees;

Called for continued activity at all levels to stimulate the development of effective *poliomyelitis inoculation programs*;

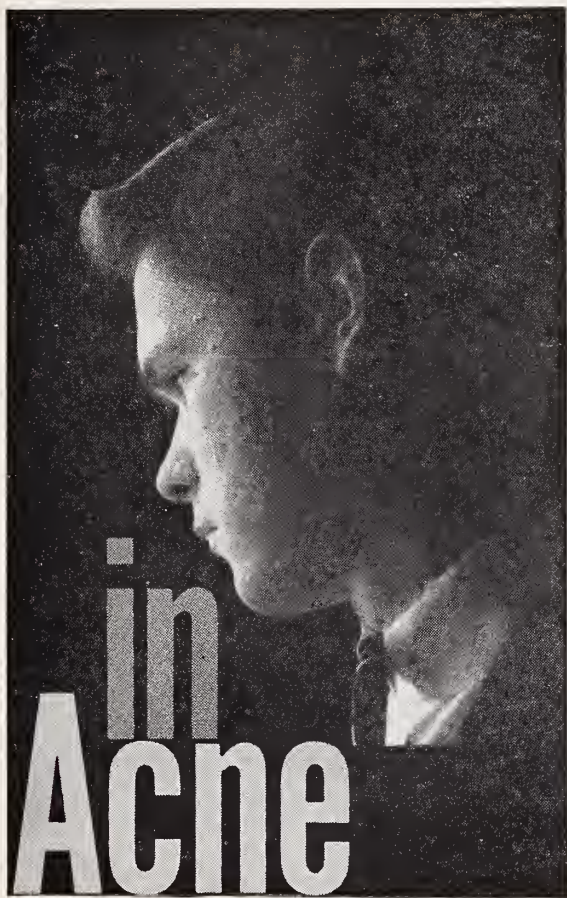
Suggested that the Association take immediate steps toward developing a plan whereby reserve medical units and individuals not immediately involved in military operations could be used to supplement *civil defense* operations, and

Expressed gratitude and appreciation for the long years of devoted service by *Dr. Austin Smith*, who has resigned as Editor of *The Journal of the American Medical Association*.

At the opening session, six state medical societies contributed a total of almost \$250,000 to the American Medical Education Foundation. The gifts were: California, \$150,305.75; Indiana, \$35,110; New Jersey, \$25,000; New York, \$19,608; Utah, \$9,977.50 and Arizona, \$8,657.50. In addition, the American Medical Association announced a contribution of \$100,000 to the Foundation.

It also was announced on the opening day of the meeting that Dr. W. Linwood Ball of Richmond, Va., A.M.A. Vice-President, had been appointed to the Board of Trustees to fill the vacancy caused by the recent death of Dr. Warren Furey of Chicago. Dr. Ball, who will serve on the Board until next June, said he will not be a candidate to succeed himself.

F. J. L. BLASINGAME, M.D.
Executive Vice-President
American Medical Association



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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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Obituary

C. STANLEY HITCHINS, JR., M.D.

1912-1958

It is with a profound sense of sorrow and loss that we note the passing of C. Stanley Hitchins, Jr., M.D. of New Haven. Dr. Hitchins died in Grace-New Haven Community Hospital on October 14, 1958 of metastatic carcinoma.

Dr. Hitchins was born in Ashland, Kentucky on September 12, 1912, the son of Clayton Stanley and Grace Layne Hitchins. He received his early schooling at Lock Haven (Pa.) High School and Mercersburg Academy. He received his A.B. at Cornell University in 1934 and his M.D. at Cornell University Medical College in 1938. His post graduate medical training was had at New York Hospital, the Brooklyn Methodist Hospital, Johns Hopkins Hospital, Boston Lying-In Hospital and Grace Hospital. He entered the practice of obstetrics and gynecology in New Haven in 1943. He served for a time as chief of the department of Obstetrics and Gynecology at Grace Hospital. At the time of his death, he was an attending obstetrician and gynecologist at Grace-New Haven Community Hospital and an assistant clinical professor of obstetrics and gynecology at Yale University School of Medicine.

Plagued with serious illness for most of his professional life, Dr. Hitchins carried on in the tradition of his teachers, among whom were Drs. Nicholas Eastman, William Stander, Fritz Irving and Harlan Perrins, imparting of his knowledge and skill to students and younger physicians.

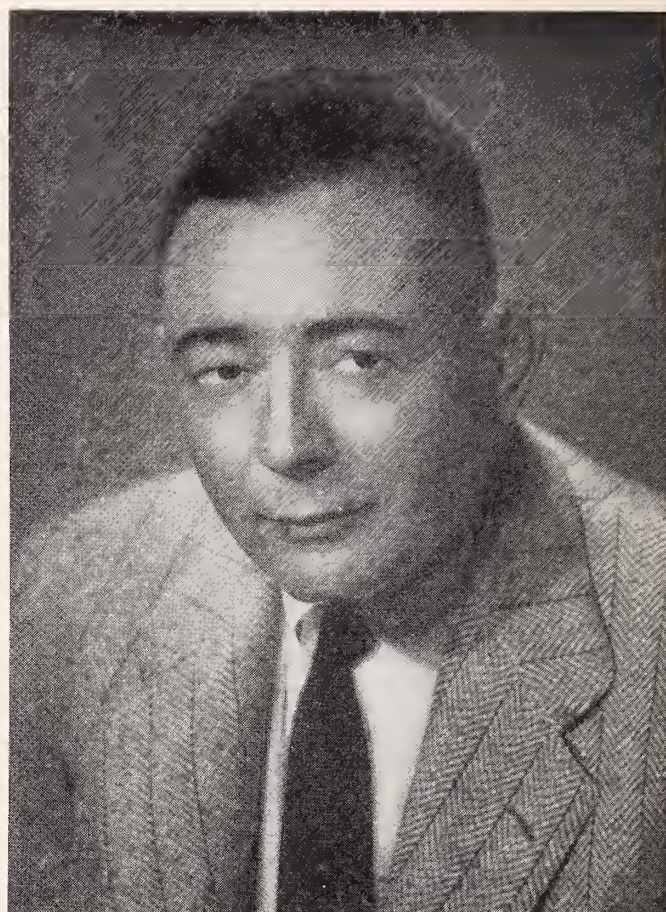
Dr. Hitchins was a member of the Church of the Redeemer, the Graduates Club, the Faculty Club, High Lane Club, the Quinnipiack Club, New Haven Rotary, the Collector's Club of New York, the New Haven City and County Medical Associations, the Connecticut State Medical Society, the American Medical Association, the American Board of Obstetrics and Gynecology (Diplomate), the Knife and Stork Club, and the American College of Obstetrics and Gynecology.

He also attained international eminence and prestige in the field of philately, which was his second love.

He will be greatly missed by a veritable host of personal friends, both lay and professional, and by patients, who were as loyal to him, as he was to them.

His many and varied services to Grace-New Haven Community Hospital will be a further monument to his memory.

HARVEY W. KAETZ, M.D.



C. STANLEY HITCHINS, JR.

IN MEMORIAM

MAHER, JOHN R.—Stratford; Boston University School of Medicine, 1927; started general practice in Stratford in 1928 and in 1950 left for four years of postgraduate study in orthopedic surgery at Yale School of Medicine; reopened his Stratford office in 1954; served on surgical staffs of the Rocky Hill Veterans Administration Hospital, Hospital of St. Raphael, New Haven, Grace-New Haven Community Hospital and the St. Charles Hospital for Crippled Children at Port Jefferson, L. I., N. Y.; and St. Vincent's Hospital, Bridgeport; died at Bridgeport Hospital November 12 of a fractured skull received in a fall at his home, aged 60.

MAHONEY, DANIEL F.—Redlands, California; Georgetown University School of Medicine, 1924; a member of the Hartford County Medical Association, residing in California and not in active practice there; died October 31, at age of 62.

SCANLON, THOMAS F.—Norwalk, Yale University School of Medicine, 1907; practiced in Norwalk for 40 years and specialized in ophthalmology; interned at St. Vincent's Hospital, Bridgeport, and first started practice in Georgetown; a member for many years of the medical staff at Norwalk Hospital; plans were being made to honor him next year upon completion of 50 years of active membership in his local, county and state medical associations; died at Norwalk Hospital November 19 following a brief illness, aged 75.

Connecticut State Medical Society Officers and Committees, 1958-59

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President-Elect:
Ellwood C. Weise, Sr. Bridgeport

First Vice-President:
Clyde L. Deming New Haven

Second Vice-President:
Donald J. McCrann Hartford

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Literary Editor of Journal:
Louis H. Nahum New Haven

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Jachin B. Davis New Haven

Speaker of the House of Delegates:
Thomas M. Feeney Hartford

Vice-Speaker of the House:
Michael R. Scully Bridgeport

Delegates to the American Medical Association
John N. Gallivan East Hartford
January 1, 1959 to December 31, 1960
James R. Cullen Hartford
January 1, 1959 to December 31, 1960
G. Gray Carter Greenwich
January 1, 1958 to December 31, 1959

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Alternate Councilor:
Maxon H. Eddy Bridgeport

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Councilor:
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Councilor:
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Alternate Councilor:
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Malcolm M. Ellison, New London
Martin E. Gordon, New Haven
Marvin Lillian, New Haven
Robert M. Lowman, New Haven
William J. Lahey, Hartford
John C. Leonard, Hartford
Herbert Levine, Middletown
Howard Levine, New Britain
Oliver J. Purnell, Rockville
A. Rocke Robertson, Torrington

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Gerald J. Carroll, Norwich
Charles N. Sullivan, New Britain
Frederick C. Gevalt, Jr., Sharon
Mark A. Hayes, New Haven
Robert S. Gordon, New Haven
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Clarence W. Harwood, Middletown
Charles H. Peckham, Manchester
Michael S. Shea, New Haven
Otto G. Wiedman, Hartford
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Robert F. Buckman, Milford
Isadore H. Friedberg, Newington
Clyde L. Deming, New Haven
Edward J. Zebrowski, Plainville
Vincent A. Gorman, Bridgeport
Bernard F. Mann, New Haven
Nathaniel Selleck, Jr., Danbury
Dana L. Blanchard, Branford
Isadore S. Goldberg, Torrington
Michael S. Shea, New Haven
Leopold M. Trifari, Hamden
William G. H. Dobbs, Torrington

4. Committee on Industrial Health

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Fred A. Anderson, Norwich
Preston N. Barton, Meriden
Robert W. Butler, Waterbury
Norton Canfield, New Haven
Roland Z. Carignan, West Hartford
Jacob A. Saltzman, Waterbury
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Clinical Medicine

Periodic Health Examinations of Executives

"Prevention is the daughter of intelligence."

—Walter Raleigh.

While preventive medicine began with protection of the masses by such procedures as the introduction of pure water supplies, proper sewage disposal, pure food laws, and preventive inoculation against smallpox, and while such public health functions must always persist, emphasis during the present century has gradually shifted from the masses to the individual. This is the result of advances in our knowledge of parasitology and immunology, the development of many new diagnostic technical processes and the discovery of new and powerful therapeutic agents. Periodic health examinations, while not new, have been extended to take in pre-employment physical examination of many workers and, in some business organizations, annual check-ups which may include not only those subject to the physical strains and hazards of manual labor but also those exposed to the mental harassments which fall to the lot of most executives. Most periodic examinations have been conducted in physicians offices and have consisted of questionnaires filled out by the examinees to furnish a clinical history, of brief but reasonably complete physical examinations, and of a few so-called "screening tests" such as hemoglobin and blood sugar estimation, urinary tests for albumin and sugar, miniature x-rays and, in some cases, single lead electrocardiograms. Such examinations have invariably resulted in the discovery of many abnormalities.

Recently Drs. Robert J. Bolt,* Charles J. Tupper and O. T. Mallery, Jr. of the University of Michigan Institute of Industrial Health have published an interesting appraisal of periodic health examinations in executives. Their technique differed from that of most such examinations in that the examinees were placed in hospitals, allowing more complete and satisfactory examinations without the inconvenience of repeated visits on an outpatient basis, a much closer physician-patient relationship, the institution of indicated treatment, more adequate instruction and follow-up, and an unusual opportunity to evaluate the various technical tests, when employed in the absence of symptoms, as to their value as "screening measures". The daily procedures, which lasted four days, are

detailed in the report and ended on the morning of the fourth day with a review of all studies by the senior staff member conferring with the examinee and discussing their significance. The results of this type of examination, begun in 1947, were reviewed in 1952 after a five year period covering 943 examinations on 500 persons.

It is to be noted first that only nineteen of those studied were women, which would be expected in a group of corporation executives. The average age of the entire group was 48.6 years with a variation from 32 to 70, though two-thirds were between 40 and 55. Of the 500 examined, 199 had returned for their second annual visit, 113 for their third, 63 for their fourth, 37 for their fifth, and 31 for their sixth. It is obvious, as the authors point out, that such a group cannot logically be compared with a collection of persons of all income brackets and occupations.

The number of those found to have defects on their first examination was very high, 77.6 per cent. Fifty-two per cent of these defects needed treatment, while 25.6 per cent were not regarded as needing any. On subsequent examinations from 12.7 per cent to 20.3 per cent of the executives were found to have new abnormalities not discovered at the first check-up. Nearly 20 per cent of the lesions discovered at the first examination were cardiovascular: essential hypertension, peripheral vascular disease, angina pectoris, arteriosclerosis, evidence of old cardiac infarcts, rheumatic heart disease and rarely syphilitic heart disease. Genitourinary diseases were found in 10 per cent: prostatic hypertrophy, hydrocele, cystitis, urethritis, and nephritis. Gastrointestinal lesions were found in 45.2 per cent: the most frequent being peptic ulcer, hemorrhoids, colonic or pyloric spasm, gallstones, and diverticulosis. Eighteen per cent had lesions of the special senses, notably rhinitis, deafness, or sinusitis. Skin lesions were observed in 17.4 per cent, most often tumors, contact dermatitis or dermatophytosis. Bone or joint disease were found in 11.6 per cent especially various forms of arthritis or peri-arthritis and bursitis. Among the miscellaneous conditions affecting 11.4 per cent, dental caries and conjunctivitis ranked high. Endocrine disorders, particularly diabetes mellitus and gout affected only 7 per cent. Neuropsychiatric conditions affected only 5.4 per cent. They included two cases of addiction and two of multiple sclerosis. Most of them were described as miscellaneous. Only three of the women showed abnormalities, two of them having uterine polyps. Cirrhosis of the liver was observed in only three of the executives. In addition there was a small group of 43 patients on whom neither the history nor the physical examination indicated disease. However, tech-

*Bolt, Tupper and Mallery, A.M.A. *Arch. Indust. Health*, 1955, Vol. 12, pp. 420-426.

nical tests revealed four with diabetes mellitus, two with tuberculosis, one with an esophageal diverticulum, ten with gallstones, sixteen with intestinal polypi, one with carcinoma of the colon, and eight with urinary infections.

The review indicated that the type of examination used by the Michigan clinicians showed that 40.6 per cent of the examinees harbored defects found on their first examination, many of them demanding treatment. Over two-thirds of them were unsuspected prior to the examination. The repeat examinations demonstrated that new abnormalities requiring treatment developed in from 12.7 to 20.3 per cent of those reexamined.

G. B.

Around the State

Litchfield County

The monthly cardiac clinical session for physicians is being held at the Charlotte Hungerford Hospital and any physicians wishing further information regarding these clinical sessions may contact Dr. Camille H. Huvelle, or the office of the Northwest Chapter Connecticut Heart Association at 60 Main Street, Torrington or telephone HU 2-5117.

Fairfield County

The appointment of Dr. John Paul Gens as medical director of New Canaan's Civil Defense organization was announced by Charles P. Morton, Civil Defense director. Dr. Gens succeeds Dr. Eric Twachtman who has left New Canaan.

The Fairfield county unit of the American Academy of General Practice, has unanimously favored the idea of fluoridation of drinking water. Dr. H. P. Dinan, Jr., acting city health director, said the academy considered fluoridation at its meeting upon his suggestion.

Dr. Dinan added that the Bridgeport Dental Society also has endorsed it.

Clifford W. Mills is the new president of the Norwalk Medical Society, succeeding Eric G. Norrington. Incoming vice president is Edward J. Flynn. New to the office of secretary is David D. Giardina. Remaining as treasurer is Ignatius J. Vetter.

The Board of Trustees of the Fairfield County Medical Association has advanced the name of James G. Murray, Greenwich, for appointment as a member of the Committee on State Legislation. Dr. Murray's name was presented to the nominating committee to represent Fairfield County and is currently serving on that committee.

Members of the Naugatuck Valley Medical Society and their wives gathered at a Christmas party last month. Serving as President of the group, which consists of physicians practising in the lower Naugatuck Valley is Jack H. Galen of Ansonia.

"Evaluation and Preparation of the Cardiac Patient for Surgery" was the topic of Vincent J. Collins, Associate Professor of Anesthesiology at New York University-Bellevue Medical Center at the December meeting of the Stamford Medical Society held at St. Joseph's Hospital.

New Haven County

A Medical Arts Building at 314 Elizabeth Street, Derby has been developed for practicing physicians in the valley area. The building which was formerly the residence and office of Dr. Paul Kennedy, has been renovated for this purpose.

Four doctors were named recently by Mayor Richard C. Lee as a Medical Review Committee to help study hospital caseloads of the City Welfare Department. Named to the new committee are Dr. Michael Shea, Dr. Samuel Spinner, Dr. Charles H. Pitegoff, Dr. Bernard R. Swan and Dr. A. F. Gen-carelli.

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BOOK REVIEWS

WHAT WE DO KNOW ABOUT HEART ATTACKS. John W. Gofman, M.D. G. P. Putnam's Sons, New York, 180 pgs.—\$3.50.

Reviewed by LOUIS H. NAHUM

The author is professor of medical physics at the University of California, Berkeley and has done much to study the lipoprotein fractions of the blood in health and disease. He has devised the so-called atherogenic index which represents the combined values of the various lipoproteins in the blood as determined by the high speed centrifuge. His studies on hundreds of patients who survived heart attacks and thousands of normals form the basis for this book.

His thesis is that the atherogenic index is the long sought for common denominator which brings all diverse knowledge with regards atherosclerosis into a conceptual frame work. Why do heart attacks occur more frequently as age progresses? Because a higher atherogenic index has been in existence over a longer period of time in these people and the excess lipoproteins in the blood have had a chance to impregnate arterial walls and cause hardening. Why are some old people free of atherosclerosis? Because their atherogenic index has been low all the time. Why do some males die young of coronary disease? Because their blood lipoproteins have been excessively high and therefore their arteries degenerated rapidly. Why do women during their child bearing period have less than one fifth the number of coronary attacks than males during the same age groups? Because their atherogenic index is low. Why is it low? It is due to the action of estrogens. Why do women over 60 come to have as many heart attacks as men? Because their atherogenic index becomes higher than that of men of the same age group and in this way their coronary artery degeneration catches up with men of equal age. Why do we find more heart attacks among the obese? Because obese patients have a higher number of individuals with a high atherogenic index and it is only these that develop heart attacks. The obese patient whose atherogenic index is normal is not more vulnerable to coronary artery disease than a non-obese patient with a low atherogenic index. And a non-obese patient with a high atherogenic index is as much a candidate for coronary artery disease as the obese one with a high atherogenic index. The same reasoning holds for hypothyroidism, uncontrolled diabetes and familial xanthomatosis. This then is the common denominator of all heart attacks, the increase of the lipoprotein particles in the blood. Nowhere throughout the tightly reasoned chapters does one read the word cholesterol. Apparently the controversy that existed several years ago between those who used cholesterol blood levels as an indication of atherogenesis and the author who employs the atherogenic index is not resolved in this book. Perhaps his position is more secure since he shows that the atherogenic index can rise as well from excessive carbohydrate intake in which cholesterol is not implicated as it does from intake of saturated fats in which cholesterol plays a large role.

The elevation of blood pressure is dealt with as a second factor of importance in the development of coronary artery disease. All investigations by the author and others have not shown that a causal connection exists between the atherogenic index and high blood pressure. High blood pressure is therefore a second primary factor. There are thus two independent



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variables both predisposing to the risk of a heart attack. It follows that in a person afflicted with both a derangement of the blood pressure and of the atherogenic index there is the highest risk of a heart attack. A corollary to this principle is that the persons who are best off in our population with respect to the risk of a future heart attack are those who have a low level of blood pressure and low lipoprotein levels.

The author deals with the question of why a high frequency of heart disease occurs in certain families and raises three questions. To the first one "Is it true that certain families are inordinately predisposed to develop coronary heart disease. His answer is definitely yes. To the second question "Is it true that all members of certain families are unusually susceptible to coronary heart attacks?" The answer is no. Only those with a high atherogenic index and or elevated blood pressure. Some members of such families escape atherosclerosis because they have neither a high atherogenic index nor a high blood pressure. To the third question "How does this family predisposition come about?" There is no answer as yet. But the author points out that a member of a family with high frequency of heart disease need not assume his future will be threatened but can find out his fate by having a study made of his atherogenic index and blood pressure. If he has a very high atherogenic index the risk is 13.5 times that of a person with a normal or low atherogenic index. This would indeed be a frightening prospect for those individuals marked for coronary attacks by the authors statistics were it not that something constructive and important can be done to eliminate blood pressure elevation and reduce the atherogenic index by proper dietary therapy. But for this one needs to read his other book, "Dietary Prevention and Treatment of Heart Disease."

In the last chapter the author proposes further research as to the biological causes of a high atherogenic index and also presents a plea for a study of the population at least every three to five years to detect those individuals with elevated blood pressure and a high atherogenic index so that they may be treated.

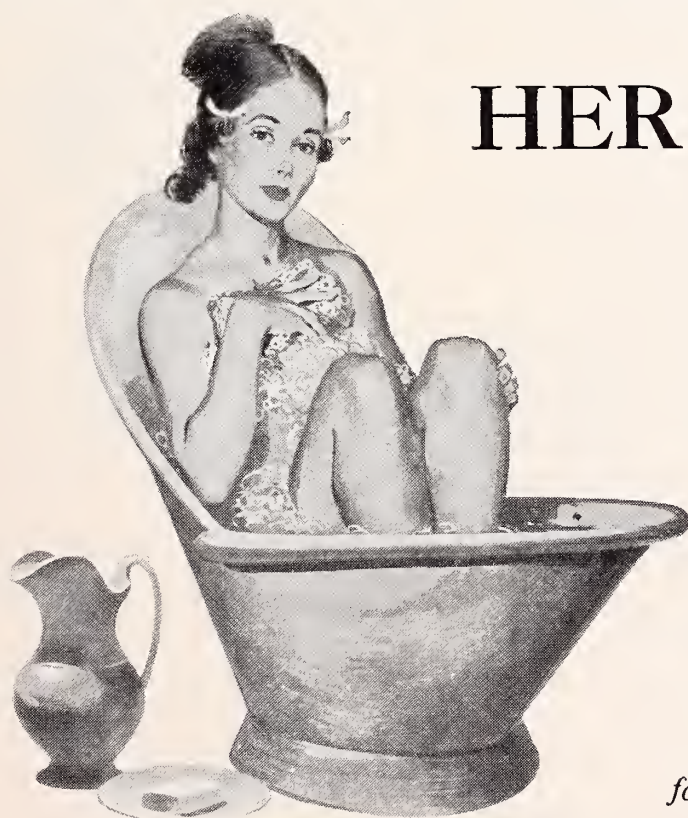
Throughout the book there exudes a spirit of optimism. Heart attacks are not to be regarded as the inevitable consequence of growing old. If members of your family have a history of heart attacks you are not necessarily next. If by testing one is found to be vulnerable there is much one can do about it. The author firmly believes heart attacks are now the most important public health problem and we have enough knowledge to overcome it—would this were really so.

HORMONE PRODUCTION IN ENDOCRINE TUMORS.

G. E. Wolstenholme and Cecilia M. O'Connor. Ciba Foundation Colloquia on Endocrinology, Vol. 12. \$8.50.

Reviewed by PHILIP K. BONDY

This three hundred page book contains a distillate of our knowledge, as of 1958, in regard to the functional capacity of tumors of the pituitary, thyroid, gonads and adrenal glands. There is also some discussion of the roles played by normal glands in the growth of cancer of the breast and testes and the function of islet cell adenomas of the pancreas and of adrenal medullary tumors. This is obviously a large area to cover and the authors assume a considerable amount of previous knowledge on the part of the reader. Although the material presented is of great interest to the clinician who may have to deal with functioning tumors in human patients, perhaps the most interesting result of the sort of studies out-



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lined here is the insight it gives into the intermediary metabolism of the hormones, the mode of their control, and the abnormalities in biosynthesis which may occur when abnormal tissues attempt to produce normal substances. The book will be of interest to any endocrinologist and should be available to anyone interested in understanding or treating cancer. It is not, however, the sort of book which can be browsed through for pleasant reading. It will require a concentrated effort on the part of most readers but this effort will be well rewarded.

Volume 12 also contains a cumulative index of the first twelve issues of the Ciba Colloquia on Endocrinology and for this reason may be of additional value to a physician who already owns other books in the series.

THE DOCTOR BUSINESS, by Walter Carter, Doubleday & Company, Inc., New York, N. Y. 260 pp. 1958—\$4.00.

Reviewed by WILLIAM R. RICHARDS

This reviewer was inclined to be somewhat prejudiced in his approach to reading this book, because he was made aware, in advance, that it had drawn high praise from Walter P. Reuther and John L. Lewis, among others.

The author has compiled an incredible amount of material which is quoted from proceedings of the AMA House of Delegates and from AMA officials, as far back as before the turn of the century. Other extensive quotations are from sources which have consistently opposed the viewpoints and policies of organized medicine. Sandwiched in between these quotations, is the author's text, and it is not difficult to perceive that he is personally unsympathetic to the traditionally free system of medical practice.

According to Mr. Carter, the AMA does not represent the average doctor, has always held greedy, unrealistic and reactionary attitudes, and has never, or hardly ever, done anything to promote or improve the care of the patient or the health of the nation. He implies that the chief goal of doctors is to profit from sickness and that patients consult physicians only when they are desperately ill, because of the expense involved.

So extensive are the charges against doctors that it would be impossible to answer them, short of writing another book in rebuttal. This book is provocative without being stimulating; it is unilaterally interpretive while appearing to be bilaterally factual; it mocks and criticizes much that is old and traditional, but offers very little that is new or constructive.

Announcements

David C. Cavicke, M.D., announces the opening of his office at 342 Montauk Avenue, New London, for the practice of neurological surgery.

Elizabeth B. Birge, M.D., announces the opening of her office at 2580 Main Street, Stratford, for the general practice of medicine and surgery.

Harvey R. Wasserman, M.D., announces the opening of his office in the County Bazaar Building, Main Street, Westport, for the practice of psychiatry.

Jefferson R. McAlpine, M.D., announces the opening of his office at 259 Dixwell Avenue, New Haven, for the general practice of medicine.

SPECIAL NOTICES

AMERICAN TRUDEAU SOCIETY announces a

Postgraduate Course: "The Measurement of Pulmonary Function in Health and Disease"

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Harvard University, Tufts University and Boston University
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March 23-27, 1959

A course aimed at physicians interested in diseases of the chest who wish to acquaint themselves with the methods used in the evaluation of pulmonary function will be presented for the ninth successive year at the Boston City Hospital, March 23-27, 1959. The methods used in the evaluation of pulmonary function and related cardiac function will be demonstrated. Tuition \$75.00. Applications and more detailed information may be obtained from the chairman of the course: Edward J. Welch, M.D., 1101 Beacon Street, Brookline 46, Massachusetts.

The following clinical programs are to be held at the
Newington Hospital for Crippled Children:

January 12, 1959, 7:30 P.M.

"The Role of the Speech Pathologist at Newington"

"The Bobath Method of Cerebral Palsy Habilitation"

Edward D. Mysak, Ph.D., Speech Pathologist

February 9, 1959, 7:30 P.M.

"Neuromuscular Dysfunction and Therapy in Athetosis"

Herman Kabat, M.D., Providence, R. I.

March 9, 1959, 7:30 P.M.

"The Problem of Scoliosis including Neurofibromatosis"

John R. Cobb, M.D., New York City

April 13, 1959, 7:30 P.M.

"Benign Tumors of Bone"

Crawford J. Campbell, M.D., Albany, N. Y.

Hartford Hospital

Saturday Morning 11 O'clock Guest Speakers

January 3 to March 21, 1959

January 3—Leon Whitney D.V.M. Orange, Connecticut. Subject: The M.D. and the Veterinarian.

January 10—Stephen Krane, M.D., Associate in Medicine, Harvard Medical School. Subject: Bone Metabolism.

January 15, 16, 17 (Three Day Visiting Surgeon). January 17—Edward Howes, M.D., Professor of Surgery, Columbia College of Physicians and Surgeons. Subject: Pending. 9:00 A.M. Nicholas J. Eastman, M.D., Professor of Obstetrics and Gynecology, Johns Hopkins Medical School. 10:00 A.M., Subject: Some Aspects of Twin Pregnancies. 11:00 A.M., Subject: Antenatal Factors in Cerebral Palsy.

January 24—Bertram Silverstone, M.D., Professor of Neurosurgery, Tufts Medical School. Subject: Reinforcement of Intracranial Aneurisms with Adherent Plastics.

January 31—John Enders, Ph.D., Professor of Immunology, Harvard Medical School (Nobel Prize Winner). Subject: The Measles Virus. (The Dwight Griswold Memorial Lecture.)

February 7—Louis M. Hellman, M.D., Professor of Obstetrics and Gynecology, New York State University School of Medicine, N.Y.C. 10:00 A.M., Subject: The Use of Oxytocin. 11:00 A.M., Subject: Current Status of Pain Relief in Obstetrics.

February 14—Myles Standish, M.D., Attending Dermatologist, Hartford Hospital. Subject: Dermatology (Kodachrome Presentation).

February 21—Frank P. Foster, M.D., Attending Physician, Lahey Clinic. Subject: The Management of Infections Associated with Surgery.

February 28—Nicholas D'Esopo, M.D., Associate Clinical Professor of Medicine, Yale University School of Medicine. Chief of the Tuberculosis Service, West Haven V. A. Hospital. Subject: Experiences with Steroids in Tuberculosis.

March 7—James F. Patterson, M.D., Assistant Professor of Medicine, Tufts Medical School. Subject: Untoward Reactions to Drug and Antibiotic Therapy.

March 14—Joseph Stokes, Jr., M.D., Professor of Pediatrics, University of Pennsylvania Medical School. Chief of Children's Hospital, Philadelphia. Subject: Repeated Plasmaphoresis in the Same Patient.

March 21 (Three Day Visiting Surgeon) March 19, 20, 21—Harris B. Shumacker, M.D., Professor of Surgery, University of Indiana Medical School. Subject: To be announced.

News From Washington

LOCAL DOCTORS WANT IN. Medical Society of District of Columbia disclosed result of a mail referendum on social security coverage. To all of the Society's approximately 1,600 active members was sent a 1-line questionnaire: "Do you favor physician participation in the SOCIAL SECURITY Program?" Spaces were indicated for "Yes" or "No" check marks. Result: 550 "Yes" and 192 "No." Note: Total response undoubtedly would have been greater if poll had not been conducted in September before close of vacation season.

"There seems to be," said the Society's statement last week, announcing outcome of the poll, "a growing sentiment throughout the country for a reversal of policy."

DOCTOR-PRESCRIBED TRAVEL HELD DEDUCTIBLE EXPENSE. A new ruling by Internal Revenue Service is that a parent's travel expenses to visit a child in a treatment center qualify as a tax-deductible medical expense item if such travel is made on competent medical advice "as an essential part of therapy and medical management." Specific case for which IRS decision was made (Rev. Rule No. 58-533) involved parents of a child under psychiatric therapy at a private treatment institution some distance from parents' home.



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1958-59 Nominating Committee

(Elected at the semi-annual
meeting Oct. 22, 1958)

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Mrs. Neil Russo, Thomaston

Mrs. Willard Buckley, Middletown

Mrs. Joseph Bruno, New Haven

Mrs. Norman Rasmussen, Uncasville

Mrs. Winston C. Hainsworth, Windham Center

Mrs. Paul Winslow Tisher, New Britain, Chairman

The annual meeting of the Woman's Auxiliary to the Connecticut State Medical Society will be held on Wednesday, April 29, 1959 at the Sanford Barn in New Haven. Mark this date on your calendar now!

County Notes

FAIRFIELD

A successful dinner dance was held at the Silvermine Tavern, Norwalk for the benefit of the Fairfield County Nurses Scholarship Fund.

HARTFORD

The President of the Woman's Auxiliary of Hartford County participated in a panel for new provisory members of the County Medical Association. The subject matter for the evening was "You and Organized Medicine." The Auxiliary explained their relationship and purpose.

LITCHFIELD

Mrs. Joseph, Litchfield County Recruitment Chairman, has contacted the Guidance Departments in Torrington and is setting up a program with them.

MIDDLESEX

The Toy Project sponsored by Middlesex County furnishes toys for the children's ward at the Middlesex Memorial Hospital. The Toy Closet is kept filled and the toys kept in good condition.

NEW HAVEN

A workshop on Della Robia Art conducted by the New Haven County President, Mrs. James Van Leuvan, was held at the New Haven Medical Library building. Contributions for AMEF were accepted.

NEW LONDON

The Mental Health Committee has reported 225 working hours to date that have been volunteered at the Norwich State Hospital. The annual Christmas party was given to the 50 woman patients that they assist with each Friday.

WINDHAM

The film "Helping Hands for Julie" has been shown in most of the junior and senior high schools in the County. This film has been very well received.

Today's Health is now on newsstands throughout the country, and leading publications are looking to us with a new awareness never known before. They are all eager to quote many of the articles that appear within the covers of "our magazine" in their own magazines.

Our new editor, Mr. Liston, who comes to us from one of the finest publishing houses in the country, has had no small part in this transformation and rejuvenation. We in the auxiliary should be more than anxious to do our share to see that each and every doctor, dentist, and nurse in the state has a subscription to this, one of the finest magazines available today.

Now that Christmas is just a few short weeks away, each county chairman worked earnestly and unceasingly so that each auxiliary member should receive—if they have not done so already—a Christmas gift subscription blank. What better gift than *Today's Health*—a magazine that brings pleasure and information to the recipient 12 times a year. Not one gift, but 12 thoughtful remembrances. The gift cards that are sent to these fortunate people who will benefit from these gifts, are truly lovely, and in the best spirit of Christmas.

Remember, in renewing your own subscription, subscribing for the first time, or in sending gift subscriptions, you help your auxiliary to reach their quota—100 per cent subscribed. It is up to you as auxiliary members to aid your *Today's Health* chairmen and put our state in the forefront.

Does your husband have a copy of *Today's Health* in his office? See that he gets one. Do you have a copy at home? Be sure to get one—you'll enjoy it so much.

I have heard that it is difficult to reach the 100 per cent goal but with the cooperation that the auxiliary members are noted for giving to each new project and difficult task that is presented to them, we in Connecticut will certainly reach our goal.

MRS. CHARLES E. MEREDITH, *Chairman*

167th Annual Meeting

CONNECTICUT STATE MEDICAL SOCIETY

April 28, 29, 30, 1959

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Connecticut Health Careers

CONNECTICUT Health Careers is a state-wide program to acquaint high school students with career opportunities in the growing health occupations. It is sponsored by the Connecticut State Medical Society and the Woman's Auxiliary to the Society and is an outgrowth of earlier Auxiliary programs for recruiting nurses.

The program has been carefully studied and its development guided during the past year by the Society's Public Relations Committee. More than 150 members of the Auxiliary are now making plans to participate in the project as local representatives to work with vocational counselors in high schools in all parts of the state.

Dr. Harry C. Knight, Middletown, who as a member of the Public Relations Committee has directed development of the program, was recently appointed by the Council as chairman of an independent committee to assume responsibility for the rapidly expanding program. Members of the committee are Doctors Bernard F. Mann, New Haven; Henry S. Eisenberg, Hartford; Winfield O. Kelley, Norwich; and Arnold Janzen, Hartford.

The committee of the Auxiliary in charge of operating the project is headed by Mrs. Edward P. Allen, New Haven, and its members include county representatives as follows: Mrs. Vincent A. Gorman, Trumbull, Fairfield County; Mrs. Clifford Joseph, Torrington, Litchfield County; Mrs. Edward Allen, Orange and Mrs. William R. Richards, Hamden, New Haven County; Mrs. Sidney Drobnes, Norwich and Mrs. John Caruso, Jr., New London, New London County; Mrs. Daniel A. LoPresti, West Hartford, Hartford County; Mrs. James R. Glessner, Portland and Mrs. William G. Ames, Essex, Middlesex County; Mrs. Rudolph E. Klare, East Woodstock and Mrs. Murray Z. Rosenberg, Storrs, Windham County.

The program may encompass almost 50 varied careers, many of which have developed in recent years in response to the dynamic progress of medical research. Most of these careers are being intensively groomed to keep up with increasing requirements. An example is medical technology. The medical technologist presently is admitted to accredited training courses in hospitals after two years of college work, but by 1960 this requirement will be advanced to three years to qualify for a college degree.

This rapid social change gives rise to pressing demands which make it obvious that more effective ways must be found to alert young people to opportunities which are springing up around them in be-

wildering array. This is the challenge which the new committee faces and it is hoped that Connecticut Health Careers will become a major instrument of medical leadership in this area of training paramedical personnel.

It is a challenge of sharpening intensity because of the racing scientific progress in these eventful years. All authorities agree that the trend will continue and this undeniably means more emphasis on the training of youth, and at earlier ages than heretofore. The impetus inherent in this situation exploded technologically even before Sputnik. And today large corporate employers of physical science graduates are extending their persuasion from the college campus to the high school classroom.

It therefore appears only fair that young people also be informed about opportunities in and related to biological science, especially those who feel little inclination to follow the star of physical science. Connecticut Health Careers is founded on this approach in the belief it will help weld the efforts of all groups in this field into an effective pattern.

The program at present is only a short way from its point of origin. This was marked October 28 when approximately 50 members of the Auxiliary from all parts of Connecticut gathered in the auditorium of the Connecticut Light and Power Company, in Berlin. They came to the half-day briefing session to gain information about the need for the program, its plan of operation, and what their responsibilities would be at the community level. These representatives were armed with kits of published material and are now establishing the project in their various communities.

All representatives have been asked to low pressure their plans so that the program can be smoothly integrated by vocational guidance counselors into regular school activities. Crash programs tried over limited periods in past years haven't proved popular and the new approach is to develop the project as a continuing community service. Educators already have noted this as a welcome development and the future relationship looks bright.

The best indications for success of Connecticut Health Careers is the enthusiasm with which members of the Auxiliary have greeted it and the full cooperation which has been extended by other professional groups conducting independent programs. These include programs to recruit medical technologists, nurses, radiology technicians, public health workers, medical librarians, hospital dieticians, and medical secretaries.

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167 ANNUAL MEETING, CONNECTICUT STATE MEDICAL SOCIETY

APRIL 28, 29, 30, 1959

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CONNECTICUT MEDICINE



VOLUME 23

FEBRUARY, 1959

NUMBER 2

Development Of Medical Practice And Trends

GEORGE F. LULL, M.D.
American Medical Association

LOOKING back over the period of almost fifty years since I received my medical degree, I have been a witness to many changes in medical practice. It is true that the startling changes are on the side of scientific medicine. Nevertheless, great changes have taken place on the socio-economic side; perhaps they are not as startling, but they affect the lives of physicians just as much.

At the turn of the century a man worked 70 hours a week and had a life expectancy of about 40 years. Now he works forty hours and has a life expectancy of 70 years. In 1900 only four out of a dozen funerals were for persons who had lived 50 years or more; now every ten out of a dozen are for people over 50.

While our population has doubled since 1900, the age group 65 and over has quadrupled. All of this has caused changes in our medical practice and has also caused serious economic changes. In our older population, as is to be expected, we are encountering a great increase in chronic degenerative disease in our daily practice. This percentage is still on the increase as more and more of our population continues to live on to older ages.

Our people are being cared for by more well-trained physicians than ever before.

Given at the Medical School of Yale University, New Haven, Conn., October 9, 1958.

At the turn of the century there were in the United States many medical schools with low standards and graduating poorly-trained physicians. Due to the activities of the American Medical Association, such schools have been closed or merged so that at the present time we have in the United States 78 four-year, four two-year, and—not in full operation—three four-year medical schools, and all of them are recognized institutions. This means that a physician graduating in this country today has been exposed, at least, to the highest type of medical education. When he has completed his medical school work, his education is of course only well on its way; to be a good doctor he must continue to study until he gives up practice.

When the poorer schools started to close, the number of graduates decreased, but due to the establishment of new, approved schools and the enlarging of old ones, the number of medical graduates now exceeds that of fifty years ago.

It must be remembered that certain areas do not need the number of physicians formerly required. There is a county I know of where 35 physicians were practicing 40 years ago. Now there are five, and these five provide a better quality of medical care than their 35 confreres did in the past. Good roads have made the physician available over a much larger territory than was ever thought of in the horse and buggy days. Rural people have

learned that it may save time to take the patient into the village to the doctor because they know he has available there x-ray, laboratory and other desirable facilities for proper diagnosis and treatment. That brings up another factor which has been instrumental in increasing the amount of medical service one doctor can render—the medical technician. Where formerly the doctor himself had to do what little x-ray and laboratory work was done, the technician now takes this off his hands and gives him time for something else.

There are still areas in the United States where there is a doctor shortage. Most of these areas are unable to support a physician or are places which afford little or no advantages for physicians' families.

Then too, there are many fields opening up where physicians' services are needed which were unthought of 50 years ago. The research worker, the full-time teacher, the full-time health officer, the government services, are but a few of these areas which are new or have greatly expanded.

The Consultants on Medical Research and Education to the Secretary of HEW reported on June 27, 1958 some interesting observations as follows:

The proportion of medical school graduates in teaching and/or research has been rising steadily (2.3 per cent in 1935, 4.9 per cent in 1940, to 6 per cent in 1945) and the consultants assume that 8 per cent of the 1957-65 classes conduct research and teach. This will add 6,300 physicians to the medical research manpower pool by 1970. This is equal to 3,200 full-time researchers.

The consultants believe that the ratio of physicians should not fall below that of 1955, namely, 132 per 100,000. To maintain this ratio the output would have to be increased to 8,700 per year from domestic schools (6,800 in 1956), plus 750 from foreign schools (in 1957 there were 1,014 foreign graduate additions). They also believe that more physicians can be produced without increasing the number of four-year medical schools. Universities should add teaching of the first two or pre-clinical years, and the existing medical schools could absorb more students in the clinical years, as the consultants believe that these facilities are not being fully utilized.

The costs of being ill have increased as has everything else, and nobody wants to spend money for something he does not want. The high cost of medical care is not new. In fact, it is mentioned in the Bible in the 26th verse of the 5th chapter of St. Mark, where the sick woman approaches Jesus, and it reads: "She had suffered many things of many physicians and had spent all that she had and was nothing better but rather grew worse."

Physicians' fees have lagged behind other costs, and of course as other costs go up, physicians' fees will follow. The physician at present receives only about 26 or 27 cents out of the medical care dollar, as compared with 32 cents in the period 1935-39.

More and more of the costs of being ill are being borne by some form of insurance. This increase has been phenomenal. At the end of 1956 there were 123 million Americans who had some type of protective health insurance—that was 86 million more than in 1951 and 107 million more than in 1941.

Let us examine what your patient has to pay to stay in a hospital, or what his insurance plan pays in whole or part, provided he has coverage. In 1957 the cost per patient day averaged throughout the United States \$26.81 as compared with \$10.04 in 1947. While it is true that the average length of stay in hospital has fallen from an average of 40 days in 1900 to 7.7 in 1956, the drop for the period covered by the cost figures quoted (1947-1956) has been only 0.4 days per case (8.1-7.7).

The health field has been one in which the social planners have been very active; it has appeal, and these people say that every citizen is entitled to the best in health care. They neglect to say that it is largely up to the individual to help out in this health care by taking at least some precautionary measure, both medical and economic. As physicians, we all want people to have the highest type of medical care, and I think that we are attempting to give it to them.

You have all heard much talk about the entrance of third parties in medical care. That is some one or some agency entering into the field of medical care between the patient and his doctor. Recently a new idea was put forth by a labor leader who, in a speech, said that he was opposed to any third party entering the health field between the union and the member. The physician was a technician who, after the other two parties decided what was to be done, carried it out. You will find that there are more and more areas in medicine where third parties are breaking in.

Now, why not turn all of this over to the federal government, as some social planners have recommended. European countries have, and look at what has happened. England went overboard, and her taxes have been far greater than anyone imagined. Her physicians are disgruntled for the most part, especially among the general practitioners; income and incentive are very low. Lord Moran (Dr. Charles Wilson) a short time ago spoke on this subject in the House of Lords. British physicians say he was largely responsible for

the present system, but, according to the London Daily Telegraph and Morning Post, he is rather unhappy at the way it is working. He is also unhappy about the medical students—it seems that since the government has been selecting them and subsidizing many of them, they have fallen off in quality. Several other physicians in the House of Lords spoke in similar vein, including the Queen's physician.

All of these things are going to be problems for you men to face in the years to come. I am unable to predict what the outcome will be. However, whether we like it or not, our profession is and will continue to be profoundly affected by the changes in the social philosophy of our country.

Last year, Dr. David Allman, the president of the AMA, spoke here at the Yale Medical School. He highlighted the fact that today physicians must play a larger role in community and national affairs, and I am going to quote as follows from that talk:

"The ivory tower of professional detachment is no longer tenable, or even possible, for the modern physician. His knowledge and his opinions are needed for the solution of too many problems which either affect his everyday activities, or may have a vital effect on the future of American medical practice. If the profession as a whole fails to take an active part in solving these problems, we shall be guilty of abdicating our full responsibility as both physicians and citizens. Whether we like it or not, modern medicine has become involved in all the cross currents of public interest, public opinion, and political action."

A survey was made recently among eastern chamber of commerce secretaries on their opinions and experiences in regard to physicians in civic service. Opinions of course were varied. One man stated what was more or less the opinion of several, as follows:

"With all respect to the medical profession, they live too much within their own sphere. Many feel that the community needs them rather than they need the community, and therefore the affairs of the community and its welfare and future are no concern of theirs. When the doctor has a problem—improved or enlarged hospital, socialized medicine, or third-party intervention—he expects the community to rally around him. The community is entitled to reciprocity."

Prior to the turn of the century physicians were much more active in civic affairs than since. Five physicians signed the Declaration of Independence.

The lack of participation of physicians is a distinct loss to both the physician and the community.

It is not enough, however, for us to speak out only when medical or public health issues arise. If we operate on that basis, we are vulnerable to the charge that we are acting in self-interest—that we become aroused only when our privileges or pocketbooks are threatened. But if we maintain a steady, non-partisan interest in local, state and national affairs—demonstrating that we are sincerely concerned over all aspects of the public welfare—then our opinions will gain greater attention and respect when a medical issue does arise.

Dr. Julian Price, a trustee of the AMA, was asked to read a paper before the American Hospital Association at its meeting in 1957. The title of this paper was "The Health of the Nation." Doctor Price, prior to preparing this paper, wrote to 80 individual physicians in all branches of medicine and asked them three questions:

1. What are the factors which have brought about the greatest changes in medicine and in the health of our nation in the past 30 years?
2. What are the strengths and weaknesses of medicine (in its broadest sense) and of the health of our people?
3. Take a look into the future and prognosticate the changes that might come in medicine—both good and bad—in the next 30 years.

I do not have time to go into what Doctor Price learned from the answers, especially to questions 1 and 2. However, it might be worthwhile to say something about question 3, his summary being as follows:

"Undoubtedly there will be great advances in technology. The number of deaths from automobile accidents will continue to increase. Airplanes and helicopters will be used extensively by both physician and patient. Closed circuit television will be employed in medical education as well as for long-distance consultation and interchange of information between individual physicians. Hospitals will call upon automation to increase their effectiveness and to decrease their costs. Synthetic foods will play an important part in diet and nutrition. Electronics and atomic energy will be used extensively in the diagnosis and treatment of disease. Chemistry will play an increasingly important role in bringing new tools with which to detect and fight pathological processes in the body.

"Most of the communicable diseases will probably be eradicated. There will be better understanding of arteriosclerosis, coronary disease, hypertension, chronic nephritis, and rheumatic fever. Diabetes will be treated without injections. Leukemia and certain types of cancer will be amenable to cure. The chemical nature of certain mental

diseases will be discovered and their control brought about through the giving of drugs. Virus diseases will increase and, thanks to the number of older people, degenerative disease will become of greater and greater concern to the practicing physician. There will be increased interest in the rehabilitation—physical, mental and social—of the handicapped and chronically ill. The field of surgery will be narrowed as more conditions become amenable to medical therapy.

"Medical practice will change. The trend toward specialization will continue with an increase in group practice in clinics. These clinics will be staffed and equipped to furnish complete care for the ambulatory patient and a large segment of the population will patronize their services. There will still be those, however, who want the attention of an individual physician for themselves and their families, and for these a new type of family physician will emerge to take the place of the present general practitioner. His work will consist of internal medicine, pediatrics and psychiatry—with office procedures in orthopedics, gynecology and surgery. Following the shift of population, many physicians will move out to the suburbs where they will be able to serve their patients more effectively.

"There will be greater emphasis on keeping people healthy. The prevention of disease—through immunizations, through better understanding of food and nutrition, through fitness programs in young people—will increase in importance. Life expectancy will increase as more is known about the process of aging and the diseases of the aged.

"Many hospitals, especially those with closed staffs, will establish their own clinics and will be in competition with group clinics owned and controlled by private physicians. Groups of hospitals in large cities will endeavor to coordinate their activities to prevent duplication of personnel, equipment, and effort and thus reduce costs and increase efficiency.

"Labor unions will increase their demands for

more medical care as fringe benefits, and there will be an increasing tendency for unions to establish their own clinics and health services, with the employment of full-time physicians and surgeons.

"Finally, strenuous effort will be made to have government participate more and more in the field of medicine. The work of the U. S. Public Health Service will be greatly expanded. An increasing amount of federal money will be appropriated for the support of research and for the building of hospitals, and similar support for medical education and medical schools will be strongly advocated. Medical care for those over 65 is now being proposed. If this is adopted, subsequent proposals are not hard to predict—complete medical care for all on public welfare roles, for the disabled, for women over 50, for all widows, for veterans and their families, for men over 50 and their families, and finally for all who hold social security cards.

"During the next 30 years the halls of Congress will resound with debate and the airways and printed pages will be filled with argument as the issues are presented to the people. Those who advocate a system of medical care, financed and controlled by the federal government, will win minor skirmishes but I do not believe they will win the major battle. The revolt of the younger generation against mounting taxation and the refusal of liberty-loving Americans to embrace socialism will be the forces which will determine the outcome."

That is a brief summary of the replies received by Doctor Price, on a look into the future. We who deal with the health and medical welfare of our citizens are confronted with great opportunities and grave responsibilities. The challenge can be answered by the best we can give in planning, in work and in service.

It is important that we maintain our confidence in ourselves, confidence in our ideals, our steadfastness and our unity as a profession, and our determination to serve our fellow man. Remember that the moral strength of our profession rests on the shoulders of each individual physician.



Dermatomyositis: Treated With Triamcinolone Diacetate

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Portland

ALTHOUGH many therapeutic agents have been used in the treatment of Dermatomyositis, most have been without effect. Steroid administration has been the most promising agent but its effectiveness has been limited by the high incidence of undesirable side-effects. The purpose of this report is to describe a case of Dermatomyositis, successfully treated with a new corticosteroid, Triamcinolone Diacetate, (also known as Aristocort Diacetate).

DEFINITION AND PATHOLOGY

A so-called collagen disease, Dermatomyositis is defined as a nonsuppurative polymyositis with various cutaneous manifestations. It is a disease of infrequent occurrence, with the majority of patients in the third and fourth decades. Insidiously progressive muscular weakness and malaise are the earliest symptoms. Lesions of the skin, described as scaly bluish-red plaques, are found over the bony protuberances of the knuckles, elbows, knees, and ankles. A violaceous or erythematous discoloration of the forehead and upper eyelids is usually present early in the disease. Later, the skin becomes pigmented and atrophic. There is a Raynaud-like atrophy, with the skin appearing tightly bound to the underlying tissue. Telangiectasia becomes more prominent and contractures develop in the extremities. Palpation reveals the subcutaneous tissue and muscle to feel thickened and indurated. The patient eventually is totally disabled by contracted and ankylosed red joints, atrophic skin and weak stringy and fibrous muscles. Calcinosis of the subcutaneous tissue is a common finding. Constitutional symptoms and laboratory findings are not remarkable. To confirm the diagnosis, the only useful procedure is a biopsy. Microscopically, skin and muscle sections are correlated with the duration of the disease. Muscle fibers show edema, vacuolar, granular and hyaline changes. Eventually, muscle

fibers lose their structure and are replaced by fibrous tissue. Sections of the skin show areas of atrophy, telangiectasia, hyperkeratosis and hydropic degeneration of basal cells. The smaller blood vessels appear dilated and there is a perivascular infiltrate of lymphocytes, plasma cells and fibroblasts. These cells invade and separate the muscle bundles.

REVIEW OF TREATMENT

Treatment with vitamin E, para-aminobenzoic acid and testosterone has been unsuccessful. In 1950, Oppel, Coker and Milhorat¹ treated a patient suffering from Dermatomyositis with ACTH. Improvement from a critical state began within a few hours after the first dose. The patient required a high dosage (100 mg. per day) and developed a moon-face and other untoward side effects. Thorn and others² in 1950 mentioned three cases of Dermatomyositis. In two of these cases, improvement occurred using ACTH. However, according to Wedgewood³ (1953), treatment with ACTH and cortisone was effective only in the acute cases of the disease. In patients exhibiting crippling residua and free from pyrexia and leucocytosis, Wedgewood found a poor or usually non-existing response to ACTH and cortisone. However, seven patients suffering from a less acute form of the disease showed gradual improvement with the administration of these agents. Undesirable side effects were the development of electrolyte and fluid disturbances with sodium retention and potassium insufficiency, hypertension, activation of diabetic tendencies, psychologic disturbances and the changes of Cushing's Syndrome.

In a study of sixty-two patients treated at the Mayo Clinic, Christianson, Brunsting and Perry⁴ concluded that prolonged administration of steroids in conjunction with other supportive measures seemed worthwhile. The untoward side-effects

they noted were hypertension, diabetes, osteoporosis, and increased weakness. Everett and Curtis⁵ reviewed nineteen cases of Dermatomyositis in adolescents and children. Eight patients were treated with corticotropin and/or cortisone derivatives. Four of the eight in this treatment group died. These investigators concluded that, "corticotropin and/or cortisone derivatives provide a feeling of well-being and suppress inflammatory signs in some patients but that these drugs do not alter the basic course or outcome of the disease. Early adequate physical measures, such as exercise, heat and splinting played a major role in the prevention of crippling deformities."

Aristocort diacetate, a new steroid compound has been used with success in dermatology. Rein, Fleischmajen and Rosenthal⁶ studied twenty-six patients in which the drug proved to have potent anti-inflammatory and antipruritic properties in the treatment of severe dermatoses. No significant side-effects were noted. It was also observed that the drug was more active than prednisolone. The following case report illustrates the remarkable success obtained in the treatment of Dermatomyositis using this drug.

CASE REPORT

Patient was a thirteen year old white male high school student who was admitted to the hospital* on January 21, 1958 because of severe muscular weakness.

According to the parents, this boy had been in good health until July 1956. At that time they noticed a bluish-red rash on the extensor surfaces of both elbows and knees. The rash was non-pruritic and did not seem to be spreading. However, in August of 1956, a physician was consulted because the rash was unsightly. A diagnosis of Psoriasis was made, but no medication was used. There was no noticeable change in the character of the rash until June 1957. At that time, the rash spread to the hands and feet. Thereafter, the parents noticed that the boy's face, arms, elbows and hands and both lower extremities were involved. The patient experienced slight itching and complained about swelling of the knees. There was a purplish discoloration over both knees and ankles. A month after the start of the rapid spread of the rash, the boy noticed that he had difficulty in bending over to tie his shoes and would have to squat in order to reach the ground. He felt tired and weak but did not experience any pain. In September 1957, the patient's parents noticed that he started to walk on his toes, "because his heels would not touch the floor." The patient became more withdrawn and

did not participate in any form of athletics or extracurricular activities. He was seen to have an awkward gait, difficulty in lifting certain objects about the house and appeared weak and tired. The boy insisted that he suffered no pain and therefore did not require medical attention. The condition progressed until the morning of January 20, 1958. The patient was found lying flat on his back and attempting unsuccessfully to put his socks on. He was unable to get out of bed without help. That evening he was brought to the writer's office. Hospitalization for work-up and therapy was advised.

Past history showed that with the exception of the usual childhood diseases and upper respiratory illnesses, the patient had not suffered from any medical or surgical illness. Family history was negative.

Physical examination revealed a thirteen year old white boy who appeared emaciated and chronically ill. Weight on admission was seventy-eight pounds; blood pressure 90/62; and temperature 99.6 F. There was a bluish-red rash which involved the skin over the forehead and the bony protuberances of the knuckles, elbows, knees and ankles. The rash was slightly scaly and consisted of small violaceous or erythematous plaques. The upper eyelids, nasal bridge and malar areas were involved with a similar erythematous eruption. Over bony articulations, such as the elbows, knees, and ankles, the skin appeared tight, atrophic and the rash had a deep purple hue.

Muscle examination showed weakness and atrophy of the abductors and rotators of the shoulder and scapula muscles. Biceps and triceps muscles were weak as were the supinators and pronators of the forearms. Flexors and extensors of the wrist, fingers and thumbs showed limitation of range. Marked atrophy of the flexors, extensors and rotators of the trunk was noted. Examination of the outer and inner hamstring muscles and extensors of the knees revealed limitation of motion and flexion contractures of both knees. Flexion deformities were also severe in both elbows, hips and ankles. The only normal muscles, (i.e. complete range of motion against gravity with full resistance), this boy exhibited were the plantar-flexors of the ankle (gastrocnemius and soleus); and the abductor (serratus anterior) of the scapula.

Examination of the lungs, heart and abdomen was normal. Neurological examination revealed all the reflexes to be intact. Cranial nerves were normal and abdominal and cremasteric reflexes were intact. There was no apparent sensory loss.

LABORATORY

With the exception of an accelerated sedimentation rate (17 at end of one hour, Cutler method),

* Middlesex Memorial Hospital, Middletown, Connecticut.

there were no abnormal laboratory findings. Three preparations for L-E cells performed on successive days were negative. Repeated urinalyses were consistently normal.

Skin, fascia and muscle biopsy from the lateral aspect of the right leg was performed. Microscopic examination of the skin showed irregular thinning of the squamous epithelium. There were many areas in which the basal layer was replaced with collagenous infiltrates that showed a fibrinoid change. In the dermis, the collagen was loose, swollen and frayed. The blood vessels in the deep dermis and in the subcutaneous tissue showed swelling of the endothelium and fibrinoid change of the collagen media. The perivascular tissue was infiltrated with monocytes, lymphocytes, and plasma cells. Sections of the muscle, showed focal and scattered degenerative changes. There was some adipose tissue between the muscle fascicles. In one field a myofibril with sharp cross striations could be seen next to a bundle in which the cross striations were lost. The sarcoplasm had a loose wavy or granular appearance. Infiltrates consisting of histiocytes, plasma cells and lymphocytes were noted.

PROGRESS

Eight days after hospital admission, the patient was started on steroid therapy. He was given 96 mg. of Aristocort a day (24 mg. q.6.h). An active physiotherapy program was instituted on the same day steroid therapy was started. Within forty-eight hours after the start of therapy, the patient appeared to improve. He seemed more alert and his appetite was better. The most marked change was the complete freedom from pruritus, which had been disturbing until this time. The bluish-red rash did not appear different.

After receiving 96 mg. of Aristocort daily for one week, the improvement in the patient's general condition was remarkable. The rash appeared duller and was non-pruritic. There was an increase in muscle tone and the boy was able to move from a prone to a sitting position and leave his bed without assistance. No sign of steroid toxicity was evident despite the extremely high dosage used. Blood pressure and pulse remained normal and there was no peripheral edema. The laboratory reported normal blood chemistries and the sedimentation rate was now within the normal range. There was only a gain of one pound in weight at the end of the first week of treatment.

The dosage of Aristocort was reduced to 80 mg. per twenty-four hours on February 5, 1958. The patient continued to do well with astonishing improvement in muscle tone and power. Following

two weeks of Aristocort ingestion (80 mg. daily), there was still no evidence of steroid toxicity and the patient's improvement was progressive. The dosage was then reduced by 8 mg. every second day until a total dosage of 48 mg. a day was being administered. He was maintained on this dosage for two weeks.

The rash on the boy's forehead, nose, elbows and knees decreased in area and intensity. The rash was less scaly and the bluish-red plaques appeared lighter in color. Appetite improved and there was a gradual weight gain.

On February 23, 1958, he was discharged from the hospital. The physical transformation in this patient in less than one month was remarkable and gratifying. The boy appeared alert and happy. He had gained a total of sixteen pounds since admission. He now walked with a normal gait and was able to dress himself and change positions in a coordinated manner. Blood pressure and pulse were normal. The rash had disappeared completely from the forehead. Over the knuckles and other bony protuberances, the dermatitis remained but was less noticeable. The skin felt soft and the underlying muscle tone was good. Flexion deformities of the upper and lower extremities had been overcome or considerably improved. Laboratory examination again showed the blood chemistries to be normal. There was no glycosuria and no disturbance in electrolyte and fluid balance. The patient had changed from a chronically ill, weakened, deformed, sad and prematurely aged person, to a smiling, vigorous thirteen year old boy.

Following discharge, the boy continued to do muscle exercises at home, and attended the outpatient physiotherapy department two times a week. He returned to school. Aristocort dosage was lowered to thirty-two milligrams per day at the end of March 1958. Blood pressure, pulse and the remainder of the physical examination continued to be normal. Dosage of the drug was lowered by 4 mg. every two weeks, until the daily intake was 16 mg. Repeat muscle examination on May 27, 1958 showed improvement in every muscle tested. Complete range of motion against gravity had been established in every muscle tested. The elbow and knee flexion contractures had been overcome.

COMMENT

Most investigators^{3,7} have concluded that treatment with ACTH and cortisone appeared to have no effect on the disease of those patients who had crippling residua. Use of steroids has been recommended in the acute cases of Dermatomyositis. Patients, who exhibited fever, muscle pain and appeared acutely ill, made rapid and striking improve-

ment. However, the use of steroids in the less acute cases of Dermatomyositis brought only gradual improvement and a high incidence of undesirable effects.

Due to the generalized weakness, advanced deformities, and poor condition of the patient described, steroid therapy seemed indicated. Since the prognosis in this case was poor, it was decided to use extremely high dosages of a new corticosteroid, in an effort to overcome the crippling residua. Triamcinolone was reported to have a greater therapeutic ratio (potency versus side effects) and to be more active than prednisolone in the treatment of severe dermatoses.⁶ The dosage used in this case was more than three times that which is ordinarily employed with this drug. Still no side effects were noted in this particular patient. However, such high dosages should be used with caution and all traditional contraindications to corticosteroid therapy should be observed.

Nine months after the start of Triamcinolone, this patient was leading a normal life and exhibited no signs of drug toxicity. Dosage for the past four months (June through October) has been maintained at 8 mg. a day. There has been no exacerbation of the disease and it is hoped that this exceptional remission will be continued.

Administration of the drug and the concomitant use of physiotherapy must be stressed. The restora-

tion of muscle tone and the overcoming of contractures are accomplished by exercise and heat. Inducing a remission and the rehabilitation of patients suffering from Dermatomyositis, seems to be dependant upon the use of steroids in conjunction with an active physical therapy program.

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Complications Of Mumps

A new and potentially serious complication of mumps in adults was reported by two University of Minnesota physicians.

It is thrombopenic purpura, skin hemorrhages resulting from a disturbance in the clotting mechanism of the blood. The disturbance occurs because of a shortage of a certain type of blood cell.

Drs. Charles P. Kolars and Wesley W. Spink, Minneapolis, said the condition "must be added as a complication" of mumps because of the potential danger of the blood cell shortage becoming chronic.

The other possible complications of mumps in adult life are inflammation of the testis, the ovary, the brain and spinal cord membranes, and the pancreas. These "can be painful and serious," the doctors said in the current *Journal of the American Medical Association*.

Thrombopenic purpura is occasionally observed in patients with other infectious diseases, but the two doctors could find no reports in the medical literature of it occurring in mumps. The fact that they saw three cases in adults "over a relatively brief period" suggests that it may occur more frequently in mumps than is realized, they said.

The cause of the complication is not known. It may result, they said, from invasion of the tissues by virus or from some type of acquired hypersensitivity.

Treatment with cortisone and prednisone, which have been found to control the other complications of mumps, controlled the bleeding tendency in the three patients and also corrected the blood cell deficiency in one.

In conclusion, the doctors suggested that mumps should be considered as a possible causative factor when patients present cases of thrombopenic purpura for which there appears to be no specific cause.

A Small Plant Medical Service In Industry

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Hartford

A NOVEL or text book could and should be written on the subject of The Small Plant Medical Service of Hartford. I must tell you about some of it in 12 minutes, a minute a year of the Service's duration so far. First of all, we know the first aid box and dispensary may be termed a purposeful achievement in industry like the first Mayflower ship that came to the Shores of New England, directed by men of faith, initiative and courage. The first aid dispensary without nurse and doctor, however, is a symbol of antiquity in meeting the demands of production and employment today just like the second Mayflower, which is a wonderful symbol of past history but is inadequate compared to the freighters and ocean liners of today.

World War II raised the curtain upon the drama of a new industrial picture that has created more and more problems in the physical, mental, spiritual and social phases of our lives. Hence the formation of the Small Plant Medical Service of Hartford in 1946 to meet the challenges of the times. As we consider some of the achievements, let us bear in mind that success in any enterprise only can be achieved when faith and good purpose serve as the foundation. The welfare of the human being must ever be held uppermost in mind. He or she is the integral unit of productivity and as the health of the employee goes, so goes the success of the industry involved.

Nationally, in 1952, 99 per cent of the employers had less than 500 employees each. Connecticut is a State of approximately 2400 small plants employing less than 500 each and only 127 manufacturing plants with more than 500 employees each, as of 1957. Statewide from 1950-1956 there has been a 28 per cent decrease in the accident frequency rate. What a dynamic and dramatic march forward to the challenging tune of "Health Maintenance for Greater Efficiency"!

In Connecticut there are approximately 34 full time and 100 part time industrial physicians, but it can be truthfully said that the key to success in any plant health program is the well trained nurse. Truly the 600 per cent increase in number of in-

dustrial nurses in Connecticut from a low of 96 in 1934 to 584 in 1957 did not come about by chance but through a desire of management to provide competent and efficient plant health programs. We are fortunate in having 101 of those nurses affiliated in 68 plants in Hartford area and 10 of them work with me in the seven plants I currently service.

In the Hartford area composed of 10 towns I am advised by the Manufacturers Association of Hartford County that there has been a 50 per cent reduction in accident frequency rate and 62 per cent reduction in the accident severity rate in the past 12 years.

The Hartford Small Plant Medical Service established in 1946 has played no small part in producing this record. We are indebted to Mr. Ellsworth S. Grant, vice-president of Allen Manufacturing Company, for his creative administrative ability in conjunction with the professional ability of Dr. Ronald S. Buchan, our first medical director. Our primary aim has always been to provide a service to our employees that would contribute to better job placement, to steadier, longer and safer employment, and to greater job satisfaction. As Dr. Buchan said at our 10th Anniversary Dinner in 1956, "the value of medicine in industry will continue to grow hand in hand with industrial development".

Visualize a city of one-half million people and you will see the number of people administered to by the nurses and physicians of our Service in 10 years. Unfortunately there have been some lost time accidents; fortunately only 450 in 10 years. We have treated 120,000 company-connected cases and almost 400,000 noncompany-connected cases tiding them over until they were able to see their family doctors. Doctors have examined 12,500 employees and held 38,000 consultations. Each employee in the seven plants has made 18.5 visits per year to the various dispensaries and 37,500 miles have been traversed by the Medical Director between plants.

The accident and severity rates are still decreasing after 10 years. Our latest average figures for frequency and severity last year reveal a frequency of 4.08, one-fourth that of the Hartford County area, and a severity of 128, one-third that of the same area.

The mechanics of the system can be only briefly mentioned in that I visit three or four plants a day for a maximum of two hours each visit. Each nurse knows of my location on a roster and I am only a telephone call away during the eight hours each day. My duties range from pre-employment and retirement physicals and job placement to that of serving as family physician on the job and conferring with the family physician who serves the home environment. Together we find a common solution to our problems and treatment and together we return and keep an employee on the job. We have no trouble with the problems of medical ethics as we follow the principles as set forth in "The Golden Rule".

Two companies who joined in 1948 show an accident rate decrease of 75 per cent to 90 per cent. Another joined in January, 1954 and severity frequency rates dropped over 50 per cent the first year and 90 per cent as of this date. A charter member has experienced a decrease of 90 per cent. Another joined in 1954 and had no lost time cases for one and one-half years.

What about absenteeism? The rate is between 2.4 per cent and 3.3 per cent with a seasonal increase of 1.5 per cent each February and March, also repeated in September and October. 75 to 80 per cent of absenteeism is due to illness, 5 to 10 per cent leave of absence, 15 to 20 per cent to excused absence and 1 to 2 per cent unexcused. Not a bad record.

Regarding dispensary visits, 1956 was a typical year and it is interesting to note that the average noncompany-connected dispensary visit is 11 visits per employee per year as compared to seven visits per employee per year for company-connected reasons. My average total of physical examinations was 176 for each of the seven plants with almost three times as many patient consultations and treatments. With over 10 years experience we are proud of a 50 per cent absenteeism reduction, over 60 per cent turnover reduction, and over 75 per cent reduction in no lost time accidents. We have given a series of Salk vaccine to 500 employees in two plants and since October, 1957 some 3800 Asiatic vaccine injections were administered, including booster doses of 0.1 cc intradermal.

CONCLUSION

I have presented this paper not only to explain the purpose and achievements of the Hartford Small Plant Medical Service, but with the hope

that this material will reach the uninformed and the unconvinced in the small industrial plants throughout this country. Our service contributes to industry in the areas of preventive medicine and health education with the benefits thus derived extending to the family physician and community at large. Together the family physician and I keep a man on the job.

Naturally there are savings derived from a medical service that can be figured in dollars and cents. For every dollar invested, savings can run from three to 10 dollars in reduced group insurance costs, compensation—labor turnover and absenteeism. Intangible benefits are:

1. Health stability of the labor force.
2. Enabling employee to produce more by proper job placement in a more healthful environment.
3. Prevention of litigation time and time again.
4. Contributing to a sense of security among employees and good will toward management.

The field is fertile and the time right for the seeds of small plant medical services to be sown in every town and city. Any town or city like Hartford could be divided into sectors, each comprising about 3,000 employees and constituting a Small Plant Medical Service such as ours.

Then in a logical location should be the central industrial clinic, serving as headquarters for the Medical Director of all sectors and nursing staff with technician where x-ray, EKG, EEG, audiometric, sound-proof facilities and office space would be available for examination by visiting specialist consultants. Operating facilities for minor to major cases could be handled and a system of transportation readily available.

Industry is expanding and undergoing dramatic changes in proportion to our increase in population. Large plants long ago recognized the need for and value of medical services. Small plants have similar problems and we have proven in the Small Plant Medical Service of Hartford that such medical services can be more than successful. As Dr. Buchan said at our 10th Anniversary Dinner, "There is no aspect of Medical Service in the 'big' plant which cannot be adapted to the 'small' plant. The question is not 'how' but 'why not'".

The Small Plant Medical Service is one answer for the proper health conservation of every industrial employee in each town, city and state throughout our nation.

The Value Of Medical History To The Doctor

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IT is only in relatively recent times that medical history has begun to take its place in medicine. This is the result of changing perspectives during the last hundred years. During this time research has advanced at an ever-increasing pace resulting in an added need for evaluation of each advance. Evaluation consists of assessing the relation of a particular piece of work to other knowledge of medicine as a whole both in the past, present—and indeed the future. Such is the function of medical history. Thus the history of medicine is likely to be increasingly appreciated in the future, and to hold an increasingly prominent place as a part of the education of the medical student. With medicine static and showing little change, as it had for centuries in the past, its history was not clearly demarcated. With medicine dynamic and rapidly growing and developing, history becomes clearer, and indispensable to those who wish to hold sane views.

Some of the prejudice which undoubtedly still exists against the study of medical history is based on the fact that in the past for many centuries too much attention was paid to the ancient authorities. Indeed after the ebullition of such Greeks as Plato, Hippocrates, Aristotle, Herophilus, Erasistratus and Galen, knowledge of medicine deteriorated for some 1,300 years. When, during the Renaissance, intellectual interest revived, it did so in a social and religious milieu in which authority as represented by the Church of Rome, was supreme. This intellectual pattern of acceptance of authority was transferred to the ancient writers, whose influence predominated during the next 400 years. Only when criticism released new thought in religious problems were intellectual fetters in the scientific field cast off. And so in Northern Italy, in England and in Holland, increasing freedom of observation and scientific freedom emerged, with frank criticism of the ancients, in particular Galen, about whom the pendulum swung from extreme subservience to extreme antagonism. Even up to the present day it is still asserted that Galen held back the progress of medicine for 1,300 years. Such

prejudice reflects, not on Galen's superb experimental and clinical contributions, but on the lack of intellectual vigour of those who followed him, and failed to improve on his views. The prejudice is again reflected in our own day in our ignorance of Galen's work: only some half-dozen of his approximately 200 extant works have been translated into English, and in the present state of Western education it is unlikely that many of the others have been much read, either in the original Greek tongue, or in their Latin translations.

The history of medicine, like so many other aspects of medicine in the last century, is rapidly changing. In some fields progress has been so rapid that in the last 20-30 years advances in research have been greater than in the two or three previous centuries. A typical example of such an advance is the increase in knowledge of cardiovascular rheology derived from cardiac catheterisation. Though so rapid, such advances are by no means simple and have the greatest significance in relation to the whole of medical theory and practice. Sound assessments of them are matters for the historian, who is of especial value if he is at the same time aware of the present state of medicine in its wider fields. Again, without the history of the method of discovery of a new drug, of which so many are flooding the market, it is impossible to assess the likelihood of its value to a particular patient. Such history may go back 5 or 500 years—it is still equally important to know it—and it is still history.

It is not only in the fields of research and practice that the outlook of the medical historian is valuable. He is of value too in linking the ever-increasing complexities of medical technology with the practising doctor and intelligent layman. It is unfortunately true to say that the medical journals, even those not devoted to medical specialties, contain an increasing number of articles difficult to understand by doctors who have been many years in practice. Surveys of the present position in a particular field are even more welcome to doctors working in other fields, and the more historical such surveys are, the more they show the

* Visiting Professor of the History of Medicine, Yale University School of Medicine, 1 October to 31 December 1958.

development of the subject from earlier ideas, the more useful they are.

The position of the doctor in our rapidly changing social system is a further topic for which the historian is a necessity. In the last half-century the function of those who qualify as doctors has greatly altered. Probably less than half those who now qualify as doctors do in fact practise clinical medicine. The others are absorbed into the enlarging work of laboratory or administration. Such changes involve different points of view—and such medical men no longer have the “traditional” outlook characteristic of the old-fashioned “family” doctor.

The frustrations and difficulties inherent in such changes may be solved only by a historical perspective of the forces at work behind them. It is only in this way that such vital problems as the cost of routine investigation and special research can be fruitfully approached.

The loss of the “traditional” doctor has been inevitable with the advance of medical technology, but it is of the utmost importance for the future welfare of the medical profession in any country that doctors remain men of culture, for without this they cannot aspire to that wisdom which is a necessary basis of good advice and management of the patient. Such general knowledge of the humanities has in recent decades been sacrificed to the burden of the increasing needs of technical education. These sacrifices are being noted by patients, who rightly or wrongly suspect the value of the direction of their life-patterns by those who, as one patient remarked, “have never heard of T.S. Eliot.” Medical history provides a royal road into all aspects of the humanities which it must be

stressed is not a waste of time to the doctor's patients, whom he is there to serve, nor therefore, to the doctor.

Though the doctor's work has flowed into laboratory, public health and industrial fields, his ethics have not changed. Nevertheless the application of medical ethics must necessarily be complex when the work itself is so different from earlier conceptions of medical practice. Those ethics, founded on the Oaths of Charaka and Hippocrates, have persisted unchanged with amazing vitality through the many centuries since they were formulated. It is of importance to the place of the medical profession in society not only that they should actually persist today, but should be seen by patients to persist. As a step in this direction it has been suggested that the Hippocratic Oath be in fact taken by doctors on qualification—a practice singularly uncommon in medical schools of today.

“The history of medicine,” writes Henry Sigerist,* “is infinitely more than the history of the great doctors and their books. Medical science is important but is wasted unless its findings are applied on a large scale.”

Thus the history of medicine has three main ingredients, doctors, medical science, and its application. This last category has hitherto been relatively neglected, and perhaps it is in the study of the history of the application of medical science that there is most usefulness to be found to doctor and patient—in this aspect medical history is contemporary history, and lives on into the present.

* Henry Sigerist: *A History of Medicine*. 1951. p. 14.

Thick Peels May Reduce Potato Caloric Value

Thin potato peelings have always been the sign—and the aim—of an economical housewife.

But there may be at least one situation when a thick peel is desirable, according to Dr. William W. Bolton, associate editor of *Today's Health*, an American Medical Association publication.

In answer to an overweight, potato-loving reader asking how potatoes can be prepared so they will be less weight-building, Dr. Bolton said the starch that provides most of a potato's caloric value is near the skin.

Thus he recommended that the skin be cut away in a thick peel.

He added, however, “We cannot give you any assurance that caloric intake will be greatly reduced, but at least it would be lowered some. . . .”

He also recommended that cream sauces be avoided and that butter and margarine be kept to a minimum. And baked potatoes are “surely off limits.”

Dr. Bolton noted that potatoes are not just starch. An average-sized potato provides 85 calories and has a water content of 77.8 per cent. Vitamins A and C are present in appreciable amounts as are calcium and phosphorus. There are trace amounts of iron and vitamin B fractions.

His comments appeared in the current *Today's Health*.

The Development Of Surgery For Cancer Of The Breast

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THE development of surgical procedures for the treatment of cancer in the female breast is a story of speculation as well as logical thinking based on sound investigative techniques and clinical trial. The earliest recorded recognition of breast cancer was in 1500 B.C. in the Egyptian Papyrus Ebers in which local application of caustic ointment was recommended as the therapy of choice. Hippocrates (circa 400 B.C.) described external cancers which he called *karkinos* or *karkinoma* which translated into Latin as *cancer* and *carcinoma*. Cures did not follow varied medical measures and Celsus around the time of Christ recommended excision, leaving the pectorales muscles intact. The Alexandrian, Leonides (circa A.D. 180), cut through normal breast tissue in order to circumscribe breast carcinoma as completely as possible. Little was added to surgical technique during the following centuries and operations during the seventeenth century consisted of elevation of the breast with large pincers, passage of sutures parallel to the chest wall and gross amputation of the breast with a large knife. A poker fired to red heat was then applied to the massive wound as a hemostatic cautery. Healing took place by granulation. The immediate postoperative morbidity and mortality were prohibitive.

During the eighteenth century some theories as to the origin of cancer emphasized the local nature of the disease and therapeutically the tumor alone was excised leaving the largest part of the organ intact. It soon became apparent to physicians treating the disease, however, that local recurrent spread of the tumor was the beginning of the end for their patients. A wider excision of the diseased breast appeared advisable.

One of the persons to recognize this fact was Joseph Adams, of the Royal College of Physicians and "physician in the island of Madeira." In 1801 he published correspondence between himself and other physicians which was originally written in the late eighteenth century. These letters centered around the theories of cancer etiology and pathogenesis; but, more important, they recounted some of his ideas regarding the surgical therapy of breast

cancer. Mr. Adams believed that cancer growth was closely related to cysts formed in many breasts:

" . . . the term hydatid, I shall proceed to my definition. By this term, I mean an animal, consisting only of a cyst and its contents, incapable of existing but in living animal matter, having powers of secreting or absorbing from its nidus the food which fills its whole cavity, and of producing an offspring similar to itself by no generative organs that can be traced. . . . That which is the subject of our present enquiry, I should call *hydatis carcinomatosa*, which, besides the difference of its contents, has also the property of stimulating the part in which it lives to form a kind of fungus, for purposes I shall endeavor hereafter to point out: my first business is to prove, if possible, the animalcular existence of carcinoma: for this fungus, though in the cancerous breast it is usually considered as the whole of the scirrhus appears to me only an appendage to the carcinomatous hydatid. . . . The cartilaginous substance you speak of, and which I call the fungus generated before ulceration, most commonly makes a portion of what is called the scirrhus part of the cancerous breast; and if ulceration has taken place, a fungus of the softer kind usually springs either around the ulcer or forming the basis of it."

One of the earliest published accounts of recognition of the local growth potential of breast cancer and an operative approach to it is contained in Mr. Adams' correspondence. In a letter to Dr. Stokes he states:

"The first step appears to me too often neglected, which should be to compare the diseased with the sound breast; and if we find a greater fullness in the former towards the neck and axilla, whether attended with stony hardness or not, we may depend on it that the disease extends beyond the indurated part. If a hardness in the axilla is attended with this fullness in the parts above-mentioned, we have every reason to believe that the multiplication of hydatids extends regularly from one perceptible induration to the other, though no fungus can be felt except in those parts where the hydatids from the greater rapidity of their growth and multiplica-

tion, or from their approaching nearer to the skin, have stimulated the parts to the production of this fungus. In this case, to remove all the disease would be to remove the whole breast and neighboring cellular substance, extending superficially from the sternum to the axilla, and in depth to the pectoral muscle under the clavicle and still more inaccessible parts."

The concepts thus pronounced founded the development of the idea of a need for complete local removal of tissue if the cancer was to be cured.

In 1867 Charles Moore of the Middlesex Hospital in London advocated this and he can perhaps be called the father of breast surgery. He understood something of the pathology of breast cancer and the problem of recurrence:

" if cancer breaks out again before the healing of the wound made for its removal, and the recurrence be rightly attributed to incompleteness of the operation, is renewed disease equally traceable to residual fragments when two, five, or a dozen years elapse before recurrence? When there have been extensive operations, there is an appearance of reason in assuming them to have been complete. On the other hand, it must be considered that operations are not adequate merely because they have been large. *A complete extirpation of cancer could hardly be looked for except from a large operation for a recent and limited disease.* For whatsoever be the method of operating, the one important point, both for practice and theory, is to remove the whole."

He emphasized the obligation of not cutting through tumor—the *en masse* removal which is the basis for modern cancer surgery. Moore's ideas permeated the atmosphere at the Middlesex Hospital but did not spread further. W. S. Handley, Hunterian Professor of Surgery and Pathology in the Royal College of Surgeons of England, suggested that the opposition was founded on the immediate danger of sepsis in Moore's operation.

The recognition that axillary masses associated with cancer of the breast were indeed extension of the tumor came about the same time. Lord Lister in the 1860's evidently was the first to point out the need for careful and complete dissection of the axillary lymph nodes and fat. He further championed the need for antisepsis in such an operation. W. Mitchell Banks, surgeon to the Liverpool Royal Infirmary, emphasized axillary dissection in 1882 when he said:

" in every case where the breast is removed, the axilla should be cleared out as a necessary accompaniment."

His comments about the completeness of the operation are worthy of repetition:

"Surgeons, as a rule, do not remove cancers of the breast. They persuade their patients that they do, and they almost persuade themselves; but there is always that little bit which they leave behind and which they fondly hope, will not grow, because it is such a little bit. Alas! that so little leaven should leaven the whole lump."

Many names appeared during this era on papers which reported basic investigations into the mode of local spread of breast cancer—Volkmann, Heidenhain, Stiles, Velpeau, to mention only a few. From these studies it became evident that lymphatics carried the disease into the pectoral fascia and from this fact originated the need for removing the pectoral fascia as well as the breast and axillary contents.

In America these ideas were promulgated by S. W. Gross at the Jefferson Hospital in Philadelphia. Gross believed in the generous removal of skin as a part of his operation. Rodman in his book, *Diseases of the Breast*, relates an experience he had while an intern to Gross to illustrate this point:

" I may relate that I was assisting him one day when he remarked to a friendly guest present, 'I will show you my dinner plate incision.' It was an enormous breast, the wound made unusually large, and when he had finished, the astonished onlooker said, 'Dinner plate, hell, it looks more like a cartwheel.' We all had a good laugh over the remark and I shall never forget the surprise of his friend and the gratification of Gross, for he was immensely pleased that the size of the incision had been emphasized even with language more forcible than elegant."

Volkmann in 1875 first advocated excision of the pectorales muscles when there was gross involvement with tumor. He did not, however, recognize the possible lymphatic permeation of the muscles by microscopic cancer emboli. Cheyne a few years later extended this idea by removing a thin layer of the pectoralis major muscle in all cases; if involved with cancer, a more generous portion was excised.

Halsted combined all of the previous ideas to arrive at an operative procedure to which little has been added in over 50 years. In 1891 he first wrote as part of a report on wound treatment in the Johns Hopkins Hospital Reports:

"About eight years ago I began not only to typically clean out the axilla in all cases of cancer of the breast but also to excise in almost

every case the pectoralis major muscle, or at least a generous piece of it and to give the tumor on all sides an exceedingly wide berth."

He expressed his reasoning as:

"Surely it is absurd not to remove the muscle when its fascia is, even to the naked eye, diseased."

It should be noted that Halsted originally did not remove the pectoralis minor muscle, rather he divided it to gain access to the axilla, and then reapproximated it.

Halsted's publication, however, was evidently not widely read for Willy Meyer addressing the New York Academy of Medicine on November 12, 1894 described his improved method for radical operation of cancer of the breast. He stated that he thought it better:

"... not to excise the breast in connection with the axillary contents first, and then to remove the pectoral muscles and clean out the sub- and infra-clavicular space; but to extirpate the breast, the contents of the axillary and of the sub- and infra-clavicular region, and the pectoral muscles in one mass."

Meyer commented at the end of his formal presentation that a few days earlier he had seen the November issue of *Annals of Surgery* in which Halsted described his operation. This was the first wide dissemination of Halsted's ideas and by that time he was removing both pectoral muscles. Meyer compared his technique to that of Halsted and concluded by saying:

"Further experience must show whether Halsted's or my plan of operating deserves preference."

Halsted continued to report the results of his operation which were the most encouraging that had yet been noted. Some alterations in technique were added as his experience grew. If there was palpable neck involvement, Halsted proceeded to a dissection of the posterior triangle of the neck. The results were so poor that he soon abandoned this part of his operation. Today such nodal involvement is a criterion of inoperability. In 1905 Handley advocated very wide removal of subcutaneous tissue and fascia. This concept has persisted and is felt necessary even now to prevent subcutaneous "recurrence."

Since the turn of the century the radical mastectomy as done by Halsted has become firmly established as the operation of choice for cancer of the breast. Variations have been introduced by many surgeons and more radical operations devised,

which have been developed principally as dissatisfaction with the long term results of the conventional radical mastectomy has grown.

It would appear today that the surgical approach to cancer of the breast leaves something to be desired. Halsted was overly optimistic in 1894 when he said:

"But now we can state positively that cancer of the breast is a curable disease if operated upon properly and in time."

He was unable, however, to reckon with the problem of remote postoperative metastases which plagues medicine today. Perhaps some day the therapy will revert to a systemic medical rather than a local surgical method. Nonetheless, the development of radical mastectomy is a credit to the many physicians who devoted much to its conception, nurture and maturation.

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One Hundred Years For Squibb

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SENTIMENTALISTS of every age are prone to look back on vanished generations and *per se* think of them as "the good old days," although on close inspection they usually turn out to have had some pretty serious drawbacks. Certainly whatever the other benefits and advantages of life in the United States were in 1858 when Dr. Edward Robinson Squibb first set up his own laboratories, it was not a reassuring time medically.

In fact, medicine as practised throughout the world had just barely emerged from the realm of superstition, folklore, and witchcraft, and was acquiring scientific stature. Modern physiology had been founded by Claude Bernard, and the invaluable practise of keeping accurate medical statistics had been started by Louis. Virchow's *Die Cellularpathologie* recently had focused attention on the cell as the primary structure involved in disease processes, but bacteriology awaited its Pasteur, and modern surgery could not exist until Lister in 1867 taught the rudiments of asepsis. As for the drugs of the period, clinical observation and the keeping of records gradually were weeding out the mass of useless remedies which had been accumulated over many centuries, leaving a few specifics—chiefly quinine and mercury—of demonstrated value.

Prior to 1846, when the value of ether was first recognized, heavy doses of opium, alcohol, or nicotine were administered to patients before operations, but in many cases, especially when time was short, the victim was operated upon without any attempt at numbing the pain. In 1846, however, Dr. W. T. G. Morton of Massachusetts made the first important public demonstration of an anesthetic ether for the medical profession at the Massachusetts General Hospital. Morton's anesthetic was crude sulphuric ether disguised with aromatics. He called it *letheon*, because ether itself was in some disrepute, having previously been used as an intoxicant.

But the mere demonstration of the anesthetic value of ether did not automatically make the boon available to everyone. On the contrary, many surgeons would not accept it. This was because the

early ether was so unreliable. It was likely to contain toxic impurities, and was highly variable in potency. The fault lay partly in the method of manufacture, partly in the fact that the liquid deteriorates rapidly in storage unless kept in proper containers. Thus it was difficult to control the depth of anesthesia, or, for that matter, to be sure of just what vapors the patient might be inhaling. Under such conditions the merciful anesthetic might become an added danger.

It fell to Dr. Edward Robinson Squibb to make the crucial improvements in the production of ether which gave the world a safe, effective, controllable anesthetic. Originally batches of ether were made in crude stills over open fire—an extremely dangerous process, and one in which the quality of the end product never was predictable. Stated in the simplest terms, Dr. Squibb's contribution was the invention of an improved, closed still and a process of distilling ether continuously by steam. This eliminated the constant hazard of fire and explosion in the older process, and—much more important—made it possible for the first time to produce pure anesthetic ether of consistent strength. It was a work which occupied years, and required the building of at least 20 stills before Dr. Squibb was finally satisfied. Unwilling to make personal capital out of the new process, he published a full account of it in the *American Journal of Pharmacy* for September, 1856, complete with drawings and diagrams, operating directions, formulae, and cost estimates. Anyone was free to use the process, and it is said that Dr. Squibb once loaned some of his apparatus to a competitor to help him get started. But the excellence of his own product defeated competitors. Squibb Ether became and remained the standard of the world, and is today made by virtually the same process which Dr. Squibb perfected in 1852.

Dr. Edward Robinson Squibb by this time was 33 years old, and already well on his way to becoming one of the notable scientific figures of his generation. He was born in Wilmington, Delaware, in 1819, of simple Quaker parents. From them, and from the circumstances of his early life, he acquired ingrained habits of thrift, endless perseverance in work, a contempt of sham and show, and utter per-

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sonal and professional integrity. "Be true as the needle to the Pole," was one of his favorite sayings, but his own character was a great deal more consistent and dependable than the magnetic compass. All his life he retained the quaint manner of Quaker speech, with its "Thees" and "Thous." "Thee is a fool!" he would reprove a bungling laboratory helper.

Young Squibb dreamed early in life of becoming a physician, and to make this possible he served five years as an apothecary's apprentice in Philadelphia. Out of his meagre pay he saved enough to enter Jefferson Medical College, where he graduated with high honors in 1845. Afterwards he remained at the college for two years as an instructor.

With the outbreak of the Mexican War, Dr. Squibb became an Assistant Surgeon in the Navy, first serving for two years on the Brig "Perry" in Mexican and South American waters, then making a cruise to the Mediterranean on the store-ship "Erie." Shipboard life did not appeal to him very much, but this period had an important effect on his later career. During his apprenticeship, Squibb of course had become aware of the untrustworthy nature of the medicines which he and his apothecary employer compounded. The fault was in the crude drugs than available. Mostly imported, these came into the country in bulk, and were liberally mixed with dirt and foreign matter, such as twigs, grass, nails, and various other objects. There were no legal pharmacopoeial standards as we understand them today, and the drugs were vaguely designated according to their vegetable or mineral origin. Standards of potency didn't exist—and three ounces of a given drug from one lot might not be equal to a half ounce from another lot. With such raw materials to work with, it clearly was impossible for any pharmacist to make up an accurate prescription. The proof of the prescription was its effect on the patient. If the medicine helped him, well and good; if not, it was too bad, but nobody could be blamed.

Squibb had considered all this deplorable, and had made up his mind to try and do something about it. But now that he was a full-fledged assistant surgeon, with patients of his own to treat, it was intolerable. Like all other government agencies, the Navy purchased drugs the way it purchased gunpowder and other ship's stores—from the lowest bidder, with few if any specifications of quality. Dr. Squibb knew that the medicines he prepared from these drugs were of extremely doubtful value, and he reported as much to the Navy.

Coming from a very minor medical officer, this pure-drug agitation at first had no effect, but after Squibb was transferred to shore duty and assigned

to the Brooklyn Navy Yard his ideas were heeded. In 1852 Congress appropriated limited funds to establish a naval laboratory for drug research, and in a small room above the morgue in the Naval Hospital, Dr. Squibb went to work, with equipment of his own design, and some of his own construction. His research was only one of a number of duties, which included serving as physician and surgeon in the hospital, supervising the employees, looking after repairs, and on occasion even ordering food and preparing menus. It was not in his character to shirk any job that was pressed upon him and consequently he always was overworked. "I seem destined always to have some troublesome and thankless office," he once wrote in his diary. "For it is impossible to refuse such things except one selfishly says that he is not willing to take a little trouble for the sake of accommodating his neighbors."

Although he was dependent on Congressional appropriations, and therefore on the good-will of various officials, Squibb never lost an iota of his independence, nor would he make concessions for the sake of expediency. This quality he retained all his life as is indicated by the story that is related of a high-ranking officer who once playfully complained that he couldn't get his finger through the neck of one of Squibb's bottles. "You are in error, my dear sir, in supposing this to be a veterinary product," Squibb replied. "It is intended solely for human use, and I had never contemplated a jackass getting his forefoot into it."

But in spite of all his contributions and discoveries, Congress refused to vote more than niggardly appropriations for the laboratory. Dr. Squibb's work was hampered by lack of funds, and there was no chance for expansion. For a time he contemplated going into private practice with a friend in Georgia, and though he decided against this, he was waiting for an opportune moment to resign from the Navy. It came in 1857, when the Chief Medical Purveyor of the U. S. Army proposed that he establish his own laboratories. Foreseeing that the Civil War was imminent, the Army for a long time had been trying to create a reliable source of supply for drugs and anesthetics, but had not succeeded in getting an appropriation through Congress. Now, if he would open his own laboratory, with private capital, the Army could buy the bulk of his output, and he would find a ready market for the remainder among hospitals and civilian doctors. With this encouragement, Dr. Squibb offered his resignation to the Navy on September 1, 1857, and on December 4 learned that it had been accepted.

He had no difficulty in raising capital, mostly among professional friends in Brooklyn, and late

in the summer of 1858 he commenced equipping the laboratories of "Edward R. Squibb, M.D." in a small brick building a short distance from his home. It was his custom to work all day, go home for dinner, and then return in the evening for more work. On Christmas Eve, 1858, he followed this practice as usual. The laboratory was now nearly completed, and in a few weeks would be in full operation. But even as he worked there that evening, putting the finishing touches on some pieces of apparatus, tragedy was waiting to blast all his plans and nearly destroy the man himself.

An assistant carelessly tipped over a bottle of ether, and the explosive fluid spilled near an open flame. In a matter of minutes fire spread through the laboratory. Squibb's first and only thought was of the records he had arduously accumulated over the years—the formulae, tests, and experimental data which represented his life's work. Disregarding his own safety, he dashed through the flames and rescued an armful of the precious notebooks. By the time he reached the street most of his clothing had burned away, and his hands and face were seared horribly.

Dr. Squibb recovered, but both his eyelids were destroyed, and for the rest of his life he wore dark glasses to protect and conceal his painfully watering eyes, and at night covered them with a pad so that he could sleep. The use of his hands he regained only by enduring painful flexing exercises of his fingers, and one hand was injured so badly that later it had to be amputated. The changes in his appearances made him sensitive about meeting people, and thereafter he avoided going out in public as much as possible. None of his physical suffering, however, hurt him as much as the destruction of the laboratory and the consequent indebtedness to his friends who had supplied the money to build it. But as he lay at home, slowly recuperating, a letter arrived which restored his hope. A group of distinguished doctors and surgeons had banded together and subscribed nearly \$2,100 to help Dr. Squibb re-establish his laboratory.

By the end of 1859, his laboratory again was in operation, and at the time of the outbreak of the Civil War was in a position to meet many of the needs of the Union Armies. Indirectly, he met some of the needs of the Confederate Armies as well, for a good share of his ether found its way into the Southern lines. It is even said that Abraham Lincoln himself chose to overlook the smuggling of Squibb Ether to the South.

The war years of course brought a vast expansion to the business, and Dr. Squibb was under constant pressure to increase production. Sometimes persons unfamiliar with his methods and principles sug-

gested compromises or short-cuts to accomplish this. A green employee once pointed out that a slight change in a certain formula would save money and speed production, and that "no one would know the difference" in the final product. "Young man, I am always willing to change a formula when I can improve it," Squibb told him. "But please remember that the master formula of every worthy business is honor, integrity, and trustworthiness. That is one formula I cannot change."

An inventory of Dr. Squibb's accomplishments between the end of the war and his death in 1900 would fill many, many pages. Suffice it to say that the laboratory flourished, and that he and his co-workers (presently including his sons Charles and Edward Squibb) maintained their record of leadership. As before, it was the character and personality of Dr. Squibb himself, the example he set for the rest of the industry, and his endless devotion to the scientific cause which, as much as his chemical and pharmaceutical discoveries, made his name great.

During the closing years of his life, Dr. Squibb's health was not adequate to the task of running the company. Management fell largely to his sons, and in 1895 the firm became known as "E. R. Squibb & Sons." However, he never lost his enthusiasm for research, and continued his experimental work almost until his death on October 25, 1900.

In an obituary published in the minutes of the Committee on Revision of the U. S. Pharmacopoeia, the following was written: "Thus has passed away from this life Edward Robinson Squibb. Pharmacy has lost a Nestor, medicine a leader, and the world the noblest work of God—an honest man."

A business created by one man and dominated by him over a long period of time usually runs into difficulties after his death. Often such a business cannot survive at all, and simply dissolves and disappears. In the case of the Squibb Company there was no problem of survival after 1900, but admittedly there was no one to take Dr. Squibb's place. For five years E. R. Squibb & Sons maintained the *status quo*. The Squibb family realized that both new capital and new management were needed, and in 1905 the reins were passed to different hands. Lowell M. Palmer and Theodore Weicker were the men responsible for the transition of E. R. Squibb & Sons from a one-man enterprise to a big business. Mr. Weicker came to the United States in 1887, having had long experience in the drug business abroad. Presently, he took degrees in pharmacy and pharmaceutical chemistry at Columbia, and later became a trustee of the Columbia College of Pharmacy. When the opportunity came in 1905 he joined Lowell M. Palmer, prominent industrialist, in the purchase of the Squibb Company.

Some few years after E. R. Squibb & Sons was incorporated in 1905, land was purchased at New Brunswick, New Jersey, for the establishment of the ether plant. Shortly thereafter, the Squibb Biological Laboratories were established at this same location and in 1915, Dr. John F. Anderson, then Director of the Hygienic Laboratory, now known as the National Institute of Health, United States Public Health Service, was appointed by the Squibb management as Director.

World War I opened up broad new avenues of medical progress. Prior to the war, the arsenical preparations indispensable in the treatment of syphilis were a monopoly of the German drug cartel and hence had to be imported. When the British blockage cut off the normal flow of commerce, small supplies were smuggled into New York on German U-boats. With America's entrance into the war, the German patents were taken over by the Alien Property Custodian, and E. R. Squibb & Sons, among others, commenced the manufacture under license of the badly needed arsenicals, in addition, of course, to supplying huge quantities of other drugs and anesthetics to our armed forces.

With the opening of the Squibb Institute for

Medical Research at New Brunswick in 1938, E. R. Squibb & Sons created one of the great centers of its kind in the world. Research in the Institute is channelled through nine divisions: Pharmacology, Microbiology, Toxicology, Biochemical Research, Organic Chemistry, Medical Chemistry, Chemical Development, Analytical and Physical Chemistry and Pharmaceutical Research. Additionally, a good proportion of research projects is carried out in collaboration with outside workers. Where a hundred years ago research was chiefly in the technical application of knowledge, in procedures and methods, today it is ranging over many fields of science and is probing constantly into new areas to add bits of knowledge to the armamentarium of medicine. New uses for established products and better ways for making all of them have been discovered and are contributing to Squibb progress.

Today, Squibb is an operating division of a vast industrial complex, Olin Mathieson Chemical Corporation, but Squibb's identity as one of the leading pharmaceutical firms in the world, noted for its fidelity to quality, its devotion to the traditions in which it was created and to the purposes to which its products are put, remains unchanged.

Immunization Schedules For Adults

Immunization schedules for adults were outlined in the current Journal of the American Medical Association.

Answering a query from a Michigan physician, one of the 900 physician consultants to the Journal said the "optimum intervals" for adult immunization, assuming that an adequate initial immunization series has been given, are as follows:

- Smallpox. Vaccination is needed every three years.
- Diphtheria. Immunization is not recommended for adults except in cases where the person shows no immunity after exposure to special risks.
- Tetanus. A booster dose should be given at the time of each injury where the danger of tetanus exists, with reinjection in the absence of an injury at intervals of no longer than five years.
- Typhoid. Reinforcing injections are necessary every three years.
- Influenza. Injections should be given every year to "risk cases," such as old or chronically ill persons.
- Poliomyelitis. Not enough time has elapsed yet to learn about the duration of protection conferred by the Salk vaccine, but a fourth dose, given not earlier than one year after the third dose, could be administered to individuals exposed to special risks.

The consultant noted that these are general guiding schedules which vary according to circumstances. For instance, for persons traveling to areas where smallpox is prevalent, revaccination at intervals as short as six months may be desirable. The same is true for persons living in areas where typhoid is common. They should get a booster dose every year.

CONNECTICUT MEDICINE

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A Bill of Rights for Physicians

Medicine is much in the news these days. Remarkable advances in basic research and improved techniques are being lauded in the press alongside articles criticizing the medical profession for its alleged shortcomings. It is the moral obligation of the profession through its organized societies to see to it that the quality of medical service is kept uniformly high and that the public is protected from the small percentage of our membership who are incompetent. Along these lines our local, county and state societies have been somewhat less than energetic.

In a laudable attempt to correct certain abuses and to protect the public, many hospitals have undertaken definite steps to reorganize their staffs that they might achieve these aims. In the zeal of certain groups, both lay and professional, the basic rights of individual physicians have often been overlooked and on occasion have even been trampled upon. In our constitutional form of government the basic rights of any one individual transcend the power of any governmental unit. The first ten amendments to the Constitution, better known as the "Bill of Rights" affirm this fact. However, as frequently practiced in hospital administration certain fundamental rights are often overlooked. New rules regarding eligibility for staff membership are often made retroactive to include physicians who have been successfully doing their work for many years. The chief of a department can cause the loss of privileges of a physician without hearing and for purely personal reasons or even for no reason. Even the freedom of speech is endangered when free expression of opinion can threaten loss of privileges. Many more specific abuses could be readily named.

In a very recent court action a Superior Court Judge has ruled that a hospital board could in effect arbitrarily give or remove privileges. This is truly a dangerous situation for all physicians whose economic existence is so intimately tied up with the right to work in a hospital.

Medicine must clear its house and our county societies in most instances have adequate machinery for performing this task. We cannot allow outside parties such as hospital boards, Blue Shield organizations or labor unions to do this. Organized medicine can best protect itself against criticism from the public by actively taking measures to protect this public from the possibly three per cent of physicians who by their actions, bring shame on all of us. Conversely, it is the duty of organized medicine to protect and fight for the basic rights of even the least of its members against any and all assaults and to see to it that the "Bill of Rights" applies even to physicians.

I. E. B.

Trews Versus Kilts

It seems that many entrenched segments of society are competing for the privilege of mutating our genes. Most prominent, of course, is the claim of those to whom our national security is entrusted: they offer us defense of the free world at the price of some harmful mutation—how much provokes violent disagreement among the experts. Among the peaceful competitors we physicians rank first, following Mother Nature's own assortment of cosmic rays and terrestrial radiation.

Certainly we must be more circumspect in our use of x-ray. Filtering, better shielding, more sensitive screens and films, and the new electronic image-amplifiers will greatly increase our permissible application of this great diagnostic instrument. But society, and we, as its leaders in hygiene, can do more to reduce our exposure.

In some cases, elaborate luminescent wrist watch dials can make a significant contribution to background radiation, recent investigators found. We do not need a dial that, in the night, informs us luminously of the phases of the moon or the month of the year.

Perhaps the most startling of recent studies is one in Stockholm¹ which showed that the temperature of the scrotum under trousers is raised enough to produce half of the present rate of spontaneous mutation. We all know that the likelihood of teratoma is tremendously elevated in the warmer, undescended testis. Trews² versus kilts now appears no longer to be a humorous sartorial argument between Lowlander and Highlander, to be carefully sustained before a peat fire in a mist of Scotch. The western world, in discarding the toga and stepping into trousers, may have taken a step backward in the name of progress. It looks as though, for the sake of posterity, only the little woman in the family can safely wear the pants.

We are not advocating that tomorrow, in the name of hygiea, we should all put aside our trews and gravely make our rounds in hastily acquired kilts. No doubt tireless scientists are right now seeking to confirm the Stockholm observations and their reports will influence "what the well-dressed man will wear."

Meanwhile, let us reconsider male underwear. May we not now tentatively aid in reducing birth anomalies and neoplasm by advising our male patients to replace snug woolies with loose-fitting, cooler shorts? No doubt research will soon report the scrotal temperature under various undergarments. The consumers publications, such as *Consumers Union* and *Consumers Research*, might well institute studies naming brands to guide those among us who are disposed to respond guardedly to

a threatening situation before all the facts are in.

A light shines dimly through the Scotch mist from Sweden: the kilts have it.

REFERENCES

1. Ehrenberg, L., Ehrenstein, G. S., and Hedgran, A.: Gonad temperature and spontaneous mutation-rate in man. *Nature* 180: 1433, 1957.
2. Trews are an Iris hand Scottish form of close-fitting trousers.

H. L.

Plain English for the Plain People

"In the promulgation of your esoteric cogitations you must be aware of platitudinous ponderosity and you must speak with clarified conciseness, coalescent consistency and concatenated cogency."

—Anon.

It is unfortunate that scientists are not always capable of expressing their discussion of new discoveries in simple English, a fact well illustrated by Edwin E. Slosson* who quotes the following but does not name the author: "The present writer is indisposed to deny that he is unconvinced of the necessity of refusing to accept the infrequency of negative reactions as a not insuperable argument in disproof of the theory." As Slosson remarks this sentence, which was described elsewhere as an example of "scientific obscurity" should really be labelled "unscientific obscurity." The reason why scientific observers should write clearly is that the education of the man on the street in scientific matters, particularly those of medical import, is now a widespread process and must continue to be. It is true that the simplification of descriptions of new methods of preventing or curing disease is not always in the hands of the scientists who discovered the methods. In many instances they are interpreted by physicians with aptitudes for clear thinking and clear writing who are appointed by medical societies or lay publications or are actuated by a spirit of service. Whatever the source of scientific or medical information intended to educate the public it must be in simple, non-technical language, easily understandable by the laity.

* Science, April 13th, 1928.

G. B.

Atomic Radiation and Leukemia

"Medicine is a conjectural art. It has almost no rules."

—Celsus.

It is one of the paradoxes of medicine that certain chemical and physical agents can cause not only aplastic lesions in the bone marrow but also

leukemia. Exposure to benzol, which is used as a solvent in some manufacturing processes, may be followed by the development of leukemia, and there are many statistics showing that the percentage of patients with this disease is much greater in radiologists than in comparable groups of people who have not been exposed to radiation.*

After the explosion of the atom bomb at Hiroshima it was discovered that irradiation from this source could also cause either aplasia of the bone marrow or leukemia. Only recently statistics have been available covering these patients because the unusual distribution of survivors by age and sex was deemed unsatisfactory for accurate evaluation at the time the leukemogenic effects were first noted. Now doctors William C. Moloney and Marvin A. Kastenbaum, members of the Atomic Bomb Casualty Commission, have issued a report† These observers, members of the group who issued the original report on the occurrence of leukemia among survivors of the bombing, state that additional cases developed during 1953 and that an analysis of these was carried out and established statistical evidence of the leukemogenic effect of the atomic irradiation.

Among the 98,000 survivors in Hiroshima city were 50 verified cases of leukemia which were classified according to their distance from the center of explosion and according to the severity of their symptoms of irradiation. Individuals with a history of epilation, oropharyngeal lesions, or purpura, were classified as severely irradiated, those with no complaints were classified as lightly irradiated. The final analysis showed that the incidence of leukemia was high in those close to the site of explosion regardless of the severity of the patient's irradiation symptoms, and that at distances of 2,500 meters or more from the explosion it approached the expected incidence of the disease in an unbombed population.

G. B.

* For references see Schubert and Höhne, in *Handbuch der Inneren Medizin*, von Bergmann, Frey, and Schweigk. Springer-Verlag, 1954. Vol. VI, part 2, page 237.

† Science, 1955, 121, 308.

Legislation

In this issue of Connecticut Medicine will be found a list of our political representatives in the Congress and the General Assembly of the State.

The publication of this list in CONNECTICUT MEDICINE has been made for the purpose of making this information readily available to the members of the State Society.

The Connecticut State Medical Society does not

maintain a lobby in Hartford to exert pressure for its views on pending legislation but this does not mean that organized medicine does not take a position on proposed legislation which may affect the welfare of the medical profession or on matters of the health welfare of the people of the state.

The State Society hopes and expects the doctors of the state to inform themselves on legislative matters coming before the General Assembly, to determine the position of the State Society in regard to special bills, as well as the reasons for the position on each bill, and to present their views to those members of the General Assembly who represent them or to those with whom they are personally acquainted.

Our political representatives are basically honest men trying to do what is best for the greatest number. They are not experts on the matters which come before them. Frequently they do not know the attitude of their constituents concerning a given bill but they welcome all the views which can be given them to help them in the decisions which they must make.

We cannot expect them to always make decisions consistent with our views but neither can we expect them to consider our views unless those views are presented to them backed by sound reasoning.

We exhort all doctors in the State to take an individually active part in influencing legislation in the General Assembly for the best interests of the greatest number.

D. S. O.

The G. P. and My Sister

My sister every year pays to go through a cancer detection clinic, although she has her own doctor. Each time she tells me about it, I have a twinge of displaced conscience for her doctor: he should be providing the care for which she goes to the clinic.

I ask questions about the clinic. It has the usual faults and virtues of the good ones. The approach is systematic, thorough, with strong emphasis on laboratory examinations. However the whole procedure is impersonal and this impersonality disturbs her. On the one hand, she being unknown, the history-taking is complete, leaving nothing to chance and omitting nothing out of squeamishness. On the other hand, the slightest frown, the merest lifting of an eye-brow by the examiner is immediately interpreted by her as indicative of some dread disease. Questions are brushed aside with the ethical response that her doctor will be notified of any suspicious findings. Her own doctor in the first place would know better how to handle her,

how to probe further without causing unnecessary alarm.

Her doctor is falling down on his job with my sister. He could do expertly what is done in the clinic, if he set himself a yearly routine to be followed with those patients who wanted it. The appropriate laboratory work need be no draw-back; it can easily be provided.

In a sense, the patient is always right. When the patient prefers the impersonal clinic to an individual doctor for a routine yearly examination, it is the doctor not the patient who has gone astray.

H. L.

Lawyers, M.D.s to Meet

The AMA Law Department will sponsor three regional medicolegal conferences next March and April as part of a continuing program to create a better working relationship between lawyers and doctors.

Locations and dates for the conferences are: District of Columbia Medical Society headquarters, Washington, March 20-21; Hotel Cleveland, Cleveland, April 4-5; and Hotel Utah, Salt Lake City, April 18-19.

Subjects which will be discussed include narcotic addiction, traumatic neurosis, Res Ipsa Loquitur and medical-professional liability, contingent fees, and impartial medical testimony.

At each of the meetings, sessions will be presented for a half day on Friday and a full day Saturday. Registration fee for each conference will be \$5 to cover the cost of a Saturday luncheon and a copy of the proceedings.

Advance registrations should be mailed to: Law Department, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.

On The Horizon

A new, inexpensive test for syphilis, based on the Reiter treponemal antigen, is proving to be so accurate it may soon replace other tests now used in routine screening. This was reported by Dr. Willie G. Simpson of the Communicable Disease Center at Atlanta, Ga., at the 9th Annual Symposium on Venereal Diseases, sponsored by U.S.P.H.S. The Reiter protein tests were more sensitive in both treated and untreated early syphilis, but not quite so sensitive in late treated syphilis. The average cost of a TPI (Treponema pallidum immobilization) test, now widely used, runs about \$30. Once Reiter tests become established, their cost could be less than \$1.

Education Cuts Liability Claims

Medical societies must undertake an active, continuous claims prevention and safety program if professional liability claims are to be avoided.

Such a program should be aimed at educating doctors in methods of conducting a medical practice that will minimize professional error and also reduce the likelihood of arousing a patient's anger should the results of treatment be less satisfying than that anticipated by him.

According to the AMA Law Department, a basic malpractice prevention program should emphasize, as a minimum, these eight points:

1—Do not undertake any procedure unless you are fully qualified.

2—When in doubt, consult with specialists.

3—Avoid experimentation or the use of drugs or procedures with which you are not fully familiar.

4—If an accident happens during surgery, explain fully and carefully what occurred. Do not conceal. Do not say, "I made a mistake." Do not blame someone else such as a nurse, but do explain the facts.

5—Always maintain current, accurate, and legible records. Never alter or destroy a record after a complaint is made.

6—If you and a patient are not compatible, sever relations and help the person find another physician. Both of you will be better off.

7—Discuss fees frankly and in advance.

8—Always obtain a signed consent before operating on a patient or administering any therapy that involves a significant risk to the patient.

On the last point, medicolegal experts say that although a written consent is not required by law, it should be obtained whether the patient is treated at home, in the doctor's office, or in a hospital.

Sometimes, the consent of operation statement for elective surgery is signed at the hospital when the patient is admitted.

But both from a medical and legal standpoint, it is more desirable to execute the operative consent in the doctor's office.

Medicolegal experts say this procedure gives ample time for an explanation of the surgery and enables the patient to have an opportunity to make his own decision freely as to whether or not he will submit to surgery.

Examples of consents to various types of operations are contained in a booklet entitled *Medicolegal Forms with Legal Analysis*, which may be obtained without charge by writing to the AMA Law Department, 535 N. Dearborn St., Chicago 10, Ill.

CLINICAL MEDICINE

MEDICAL GRAND ROUNDS

FROM GRACE-NEW HAVEN COMMUNITY HOSPITAL, OCTOBER 4, 1958

Dr. Jay W. Kislak:

L. C. is a 19 year old white married female, who was admitted to this hospital for the first time on 7/30/58 with the chief complaint of headache for two days prior to admission. The patient was in good health until the morning of the day prior to admission when she awakened with a dull, steady, right fronto-temporal headache. The headache persisted during the day and radiated to the back of her neck and down her spine. She noted associated loss of appetite, malaise, photophobia and feverishness. On the morning of admission the headache was bilateral as well as fronto-temporal, severe, and throbbing in nature. Photophobia became more marked and a temperature was recorded at 103° F.; there were no associated chills. She consulted her private physician who referred her to the hospital for admission. The patient did not recall contact with persons having a similar illness and had not experienced a recent upper respiratory infection. She had not received Salk vaccine shots. Her past history, family history, and social history were non-contributory and review of systems was negative, except that her last menstrual period had occurred two months prior to admission and she believed herself to be pregnant.

Physical examination revealed an acutely ill white female. The blood pressure was 130/80 mm. of mercury, pulse 120 beats per minute and regular, temperature 103° F., and respirations 20 per minute. Examination of the nose and throat demonstrated a mild pharyngeal injection. Fundi were within normal limits. There was marked nuchal rigidity. The heart and lungs were normal. The neurological examination was within normal limits; no Kernig or Brudzinski responses were elicited, and no muscle weakness was demonstrable.

Admission laboratory data included a hematocrit of 32 per cent, white blood cell count of 8,100 per cc., with a normal differential count. Urinalysis showed 1+ protein, and a stool specimen was guaiac negative. A lumbar puncture on admission revealed an initial pressure of 250 mm. of cerebrospinal fluid, with 800 white cells per cu.mm. of

which 92 per cent were polymorphonuclears and 8 per cent lymphocytes. Spinal fluid protein was 43 mg. per cent; the spinal fluid sugar was 39 mg. per cent, and blood sugar obtained simultaneously was 104 mg. per cent. Gram stain and acid fast stains of the spinal fluid sediment were negative. Nose, throat, urine and blood cultures revealed either normal flora or no growth. PPD skin test for tuberculosis, heterophile, serum non-protein nitrogen, fasting blood sugar, total proteins, electrolytes, electrocardiogram and chest film were within normal limits. Figure I demonstrates the patient's hospital

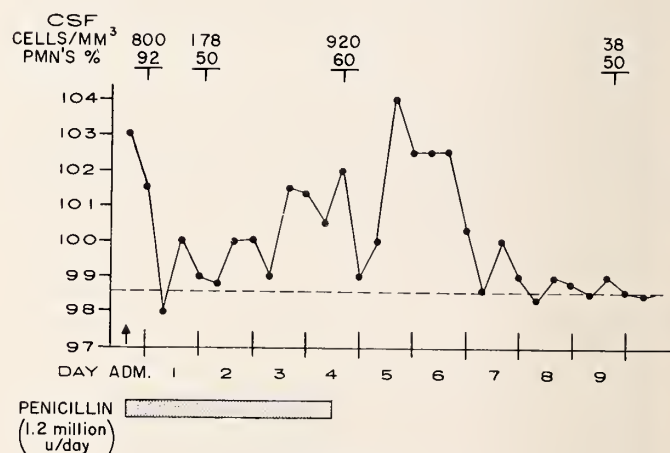


FIGURE 1

Patient L.C. Hospital temperature chart and CSF white blood cell counts.

course. Because of the high cerebrospinal fluid cell count and the patient's toxic appearance she was started on penicillin therapy which was continued until the fourth hospital day. She had a low grade fever of 100-101° F. during the first four hospital days. A repeat lumbar puncture performed on the second hospital day showed 178 cells per cu.mm. of spinal fluid, of which 60 per cent were polys, and 40 per cent lymphocytes. On the fourth hospital day the patient's temperature spiked to 104° F. and there was an increase in nuchal rigidity. Lumbar puncture performed at this time showed an increase in cell count to 920 per cu.mm. with 60 per cent polymorphonuclears and 40 per cent lymphocytes.

Culture and Gram stain of spinal fluid sediment again were negative. Following this episode the patient improved during the next twenty-four hours and was afebrile for the last three hospital days. A final lumbar puncture performed on the day of discharge showed 38 cells per cu.mm., with 50 per cent polymorphonuclears and 50 per cent lymphocytes. Virus isolation studies were performed on the patient's throat washings, stools and spinal fluid, with the isolation of an ECHO 9 virus from throat washings and spinal fluid. She is presented as a case of aseptic meningitis due to ECHO 9 virus.

Dr. James P. Nolan:

During the months of July, August and September, fourteen cases of acute viral meningitis in adults were diagnosed and admitted to the Grace New Haven Community Hospital. Because of this unusual incidence of the disease, an analysis of the clinical and laboratory aspects of these fourteen cases was undertaken.

The sex distribution of the cases was evenly divided; the ages ranged from 17 to 33 years, the average age being 23 years. Prodromal symptoms lasted from one to eight days. The typical patient presented for admission two or three days after the onset of his illness. None of the patients had a diphasic prodromal period so often seen with acute poliomyelitis.

In the accompanying table (Table I) the frequency of the various presenting symptoms is shown. All patients had rather severe headache and generalized malaise. The most impressive symptom, found in 78 per cent of the cases, was severe retro-orbital pain and photophobia.

On physical examination thirteen of the fourteen patients had stiffness of the neck; eight of 14 patients showed injection of the pharynx. Neurological signs were not prominent; one patient had an absent gag reflex on admission and another patient developed an equivocal right Babinski response during hospitalization. No skin rash was noted on any of the patients.

White blood cell counts on admission ranged from 3,500 to 15,200 cells per cu.mm., and eleven of fourteen patients had counts of under 11,000 cells. The differential cell count was normal in all patients except one who showed 86 per cent polymorphonuclear leukocytes in his peripheral smear. On the initial lumbar puncture the cerebrospinal fluid was uniformly clear and the pressures were within the normal range. The number of white blood cells counted per cu.mm. varied from none*

to 1,380 with an average of 575 cells. In one patient no white blood cells were observed in the cerebrospinal fluid; in three patients the count ranged between 100 and 500 cells, and in five patients the count was between 500 and 1,000. Two patients had 1,000-2,000 cells in their fluid per cu.mm.; one patient had 2,380 cells per cu.mm. of cerebrospinal fluid. The number of lymphocytes in the spinal fluid varied from 9-100 per cent with an average of 70 per cent. It is of interest that five of the patients had 50 per cent or more polymorphonuclear leukocytes in their cerebrospinal fluid, a situation ordinarily considered unusual in the non-bacterial meningitides. Four patients had normal cerebrospinal fluid protein; in seven patients the protein was between 46 and 75 mg. per cent, and in two patients, between 76 and 100 mg. per cent. Only one patient had a protein greater than 100 mg. per cent, a value of 112 mg. per cent.

A majority of the patients had remarkably benign hospital courses. The maximum temperatures in the hospital ranged from 100.4° to 104° F., with 102° being the average elevated temperature recorded. The duration of fever in the hospital was from one to four days with most patients being afebrile by the end of the second day.

Virus isolation studies were undertaken in thirteen of the patients and a viral agent was isolated in seven cases. In two instances, virus was recovered from the stool, in three cases from the throat washings. In four cases the spinal fluid yielded virus. A virus was recovered from both the spinal fluid and the stools of two patients. In six of the isolations the virus proved to be ECHO 9; the seventh isolation was typed as Coxsackie A-9. In view of these results and with the prominence of ECHO 9 infections this summer in Connecticut, it was thought likely that the increase in so called aseptic or viral meningitis was largely due to this agent.

TABLE I
PRESENTING SYMPTOMS IN THE FOURTEEN CASES

<i>Symptoms</i>	<i>%</i>
Malaise	100
Headache	100
Myalgia	93
Anorexia	93
Retro-orbital pain	78
Photophobia	78
Nausea	57
Sore throat	50
Chills	36
Vomiting	36
Cough	14

* One patient, without cells in the spinal fluid, presented with fever, severe headache, stiff neck, and weakness of one lower extremity. Coxsackie A-9 virus was isolated from her spinal fluid.

Dr. Dorothy Hortsmann:

The patient presented illustrates some of the problems connected with virus infections in Connecticut in 1958. Physicians in practice have been aware of the fact that there has been a great deal of acute illness in children and young adults in the community. In the virus laboratory, we have been able to show that most of this has been due to ECHO (Enteric Cytopathogenic Human Orphea) viruses, ECHO 9 predominating, some to Coxsackie A₉ and some to the Coxsackie B group. Clinically, however, the illnesses produced by these agents are usually indistinguishable. The two common clinical pictures have been aseptic meningitis, and non-specific febrile illness. Last year Dr. Sabin reported that in the Milwaukee ECHO 9 outbreak, for every case of aseptic meningitis admitted to the hospital there were approximately 175 to 300 nonspecific illnesses in the community. If this figure applies to Connecticut for 1958 it is clear that the 50 or 60 cases of aseptic meningitis which we have seen in the Grace-New Haven Hospital represent only a few of the many thousands of infections which occurred in the area.

As for the ECHO 9 infections,—and to a lesser extent those due to Coxsackie A₉—the most outstanding clinical feature in both types of illness has been rash—often a dramatic florid eruption, beginning on the face and spreading down over the trunk and extremities. Early in the season, the rash led to confusion with rubella,—and indeed it may be difficult to distinguish the disease from rubella except on the grounds of absence of the characteristic lymph node involvement of the latter. A striking feature of the rash, however, is its age predilection: almost all children under three or four who are infected with ECHO 9 virus develop rash, while older children and young adults rarely do so. Another point is, that while the rash is usually maculopapular—it may be petechial. This can and does cause confusion with meningococcal infection.

The patient, Mrs. C., showed two features sometimes seen in ECHO 9 virus infections which may suggest a bacterial rather than a viral disease. These are the high per cent of polymorphonuclear cells in the CSF, and the persistence of the high CSF cell count over a period of 10 days or more. Other patients have shown in addition, elevation of CSF cell counts to 2,000-3,000 and even higher. It is well known that in poliomyelitis, there may be a predominance of PMN leukocytes in the CSF early—in the first 24 hours, but this usually disappears

promptly. Not so, necessarily, with ECHO 9 aseptic meningitis. In some outbreaks, as many as 25 per cent of patients have had 50 per cent polymorphonuclear cells for as long as four or five days after onset. Also—as in mumps—the high total cell counts have tended to persist. If a patient has a predominance of polys in the CSF and a petechial rash, it is not surprising that a diagnosis of meningococcal infection is often made. This situation arose in an 11 month old infant seen on Fitkin 4 this summer with ECHO 9 aseptic meningitis, and several similar cases have been seen in Boston and reported in the New England Journal. Obviously, it is necessary to treat such patients on the assumption that they have meningococcal meningitis, recognizing the possibility of a viral infection.

The epidemic seen this summer raises the question as to whether the ECHO 9 disease is something new, or is it an old friend now suddenly become epidemic. Of course no one knows, but one thing seems certain, and that is that there have been no great epidemics previously. Perhaps, as with poliomyelitis at the end of the 19th century, this “new” disease has suddenly changed epidemiologically from being a rare sporadic infection to an epidemic one.

Dr. Freedman: Any chance that name “Orphan Viruses” will be changed?

Answer: The term “orphan” coined by the late Dr. Duran Reynals was suggested because when first discovered it was not known whether these viruses were associated with disease or were more or less normal inhabitants of the g-i tract. Since it has become clear that they can cause disease, the problem has not been much easier—for none causes a specific disease, and all can cause one or another of disease syndromes mentioned. Therefore, it seems likely that the term ECHO will continue to be used for some time at least, and only if a distinct new disease turns up associated with any one of them, will there be name changing.

Question: Can passage and manipulation cause ECHO viruses to change?

Answer: The ECHO viruses have as one of their characteristics great antigenic variability and probably mutability. This variability has been observed in many of the newly isolated strains of a given type and it has been necessary for instance to designate type 6', and 6'' indicating partial but not complete identity with the prototype ECHO 6.

The Education of Patients

Toward the end of the nineteenth century the eminent English neurologist Henry Head stated that one of the difficulties encountered in the practice of medicine was a *time* element. He explained that the thorough examination of some patients was so time-consuming that if the investigation of all patients required the time involved in that of the more complex cases, practice would be almost impossible. But times have changed since then in many ways and yet physicians are still responsible for the education of many of their patients, and particularly for their instruction in some diseases as to the *details* of the treatment. The impression of many patients that all they need is a bottle of medicine or a few shots of a miracle drug is very far from the truth. What the physician must give, especially in some chronic diseases, is precise advice. This may take a good deal of time, for patients may be quite ignorant of the structure and functioning of the system affected, and are much more likely to carry out instructions if they understand the reasons underlying a suggested regimen.

As any old practitioner well knows the changes that have taken place in the practice of medicine in the past fifty years are extraordinary. The greatest advances perhaps have been in the discovery of the causes and methods of control of many of the infections. The scope of surgery has been greatly broadened by aseptic methods which have permitted the exploration of body cavities formerly shunned and operative procedures on their contained viscera. The curse of childbed fever has been removed by similar methods of cleanliness. Diagnostic techniques, physical and chemical, have multiplied enormously and the scope of the older urine and blood examinations has been re-explored and expanded.

One of the most striking changes has been the education of the public in medical matters through printed material, radio, and television. The American Medical Association now publishes a journal covering medical problems for the education of the laity. Inexpensive books on many aspects of medicine are on the market, many newspapers and magazines employ trained scientists to present the stories of medical advances. Many newspapers regularly publish medical columns, some of which discuss the problems of disease with great intelligence and excellent judgment, notably the widely-read comments of Dr. Walter Alvarez. The layman might well surmise that there is adequate publicity about medical problems, but unfortunately there is still a small percentage of illiterates and a large num-

ber of foreigners in our population. All people do not read the medical columns in the newspapers or have access to radio or television, and some simply will not take the time to acquire medical knowledge.

The writer's attention was focussed anew on this problem by an excellent illustrated article by Drs. Morgan* and Yore that demonstrates methods of presenting detailed instructions as to treatment to patients with emphysema, asthmatic bronchitis, and bronchiectasis. The article is illustrated with simple line drawings showing the anatomy of the respiratory tract and the mechanics of breathing, photographs of x-rays of the chest, and line drawings of the sources of irritants to the tract. The importance of diet, protective clothing, fatigue, climate, avoidance of irritants such as tobacco smoke, house and atmospheric dust, cooking fumes, and allergens are briefly discussed with appropriate diagrams. The necessity of avoiding useless cough and for clear airways is stressed. There is a discussion of various medications. There are photographic illustrations of the technique of postural drainage.

This sketchy description is cited to call attention to the multiplicity of details which may have to be explained to patients with some chronic diseases. It illustrates the main thesis of this editorial: the necessity for detailed education of the patient by the attending physician.

G. B.

*Morgan, Edward H. and Yore, Richard W., Bull. Mason Clinic, Seattle, Wash., 1954, 8, No. 3, p. 81.

New Procedure for Delayed Recovery of Streptococci

A simple, practical method to provide a satisfactory transport medium for throat swabs, long needed to increase control of streptococcal infections as part of the program to prevent rheumatic fever, has been reported by N. F. Hollinger and L. H. Lindberg (*Am. J. Pub. Health* 48: 1162, Sept. 1958). Utilizing Dacron throat swabs and filter paper strips, the authors ran pilot studies at pediatric clinics and found that these materials, readily available to physicians, efficiently transported pharyngeal material for the delayed recovery of beta hemolytic streptococci. This eliminates the need for plating at once onto blood agar which then necessitates incubation at 37° C. without excessive delay.

THE PRESIDENT'S PAGE

AT the request of Dr. Denis O'Connor, Managing Editor of Connecticut Medicine, I was asked to express my views on some of the impending problems confronting the Connecticut State Medical Society.

The foremost problem is probably the relation between Connecticut Medical Service, Inc. (Blue Shield) and the State Society. Although the major problems between these two organizations have been amicably settled, there are a few items still remaining. The one is whether a new contract covering major medical expense should be issued.

The trend of the day is for more extensive coverage than the present Preferred Contract provides. Many private insurance companies now offer such coverage, even up to \$10,000 for any one illness. This is now well advertised over radio broadcasts. I am personally in favor of more extended coverage by Connecticut Medical Service than is included in the scope of the present contract.

There now exists a liaison committee consisting of five members of the Council of the Connecticut State Medical Society and five members of the Board of Directors of Connecticut Medical Service, Inc. I am convinced that this committee will evolve a solution to this problem.

It is important that Blue Shield be synonymous in the public mind with benefits that merit general public favor. Does the public have the right to expect that this physician-sponsored enterprise meet the need for prepayment of medical care costs with benefits that are broad enough in scope and fee payments that bear a reliable relationship to the doctor's charge?

I think it is vital to the very life of private medical practice, and if Blue Shield *cannot* develop the means of answering the social needs in support of private practice, the public may be willing to let private practice, with good patient-physician relationship, expire and closed-panel or government plans replace it.

A second item that concerns the State Society is whether or not a representative of organized labor should be added to the lay group of directors of Connecticut Medical Service, Inc. The labor unions certainly give direction to the thinking and acts of a large proportion of the working population of Connecticut and it is my opinion that representation of organized labor on the Board of Directors of Connecticut Medical Service, Inc., would be stimulating and instructive.

This expressed opinion by me will be considered by many doctors in the State as a most radical and out-of-line thought. Again, thinking of the change in times and the change in the practice of medicine as has occurred in the past few years and in my opinion will continue, I consider it logical.

Another problem that confronts society in general and the physicians of the State in particular is the care of the so-called senior citizen. This is the time of life when coverage on a prepaid basis is most necessary. I am convinced that the liaison committee, working in conjunction with the Council of the State society, can present a plan for coverage of this group, perhaps on an individual basis, if they are not covered as a group at a place of employment.

It has been a privilege to present a few of my views on this page.

Walter I. Russell, M.D.

FROM THE SECRETARY'S OFFICE

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COUNCIL MEETING

Wednesday, January 7, 1959—3:30 P.M.

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 3:30 P.M. on Wednesday, January 7, 1959. Present in addition to the Chairman were Doctors Russell, Weise, Polito, Richards, O'Connor, Carter, Gallivan, Cullen, Scully, Davis, Gens, Clarke, Kennedy, Buckley, Blodinger, Archambault, Schiavetti, Eddy, Seigle, Grendon, Gardner, Rentsch, Gilman. Absent were Doctors Ottenheimer, Starr and Hughes.

ACCEPTANCE OF MINUTES. The written minutes of the November 29, 1958 meeting were accepted without correction or addition.

CORRESPONDENCE. In compliance with the directive of the House of Delegates, December 11, 1958, the Executive Secretary read the letter he had sent to Mrs. Creighton Barker, the text of which follows

"On Thursday, December 11, the 1958 semi-annual meeting of the House of Delegates was held at Hartford. Most of the delegates present inquired about Creighton and expressed deep concern and sympathy on learning of the serious nature of his illness.

"By unanimous vote of the House, I was directed to convey to you the knowledge that Creighton was missed and to send him sincerest hopes for recovery.

"Except for our acquaintanceship during the brief time before his retirement, I knew him only by name, but the ability, loyalty and efficiency of the Secretary's office staff constitute a real tribute to his efforts throughout the years.

"As his successor, I am reaping many benefits from the harvest he sowed, and I should like to send him my thanks for a job well done and my best personal wishes."

A letter from Mrs. Creighton Barker in reply was also read as follows:

"Please convey to the House of Delegates my sincere thanks for their kind expression of sympathy and hope for Creighton's recovery.

"It would give him a great deal of pleasure and satisfaction to know that the members of the State

Society appreciated his work. Unfortunately he will never know about this or the hundreds of letters I have had expressing concern and good wishes.

"With best regards to the members of the State Society and to you as Executive Secretary."

NATIONAL ADVISORY COMMITTEE TO THE SELECTIVE SERVICE SYSTEM. A request was presented from the National Advisory Committee to the Selective Service System for the names of three physicians from which the National Committee could select a successor to Dr. Barker, who formerly served as the Chairman of the Connecticut Advisory Committee. After discussion of several possible nominees, it was VOTED that the Chairman designate the names of the three members of the Society to be recommended. The following names are being submitted to the national office: Mario L. Garofalo, New Haven, William R. Richards, New Haven, Gilbert Manheim, New Haven.

RESIGNATION FROM COMMITTEE ON HOSPITALS. A letter of resignation from Jack H. Galen, Derby, from the Committee on Hospitals was read. It was VOTED to accept Dr. Galen's resignation and defer making any replacement on this committee at the present time.

REPORT OF COMMITTEE ON POSTGRADUATE EDUCATION. A report, with recommendations, relative to the date and place for the 1959 Clinical Congress was presented and it was VOTED to accept the report and recommendations. The site of the meeting will be New Haven at the Yale School of Medicine; the tentative date is September 30, 1959; commercial exhibits should not be encouraged for the one-day meeting; interns and residents be admitted but not medical students.

REPORT OF DELEGATES TO COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES. Dr. Stringfield joined the Council at this time to discuss a number of matters which had been given consideration at the meeting of the New England Council on November 5, 1958. The following matters were covered:

(a) A possible insurance plan for all New England Medical Societies.

(b) A possible investment plan for all New England Societies in the event that the Jenkins-Keogh Bill is passed by Congress.

(c) The desirability of reciprocity of licensure between the New England states.

(d) A possible program of postgraduate education, perhaps integrating some of the activities of the Clinical Congress with the New England Postgraduate Assembly.

(e) The possible establishment of a New England Medical Association. On this point Dr. Stringfield stated that the New England Council was not enthusiastic about the formation of such an association, but felt that the New England Council should be strengthened by increasing the number of representatives from each state. This could be done by adding the President, President-Elect, AMA Delegates, and Chairman of the Council of each member Society as official representatives.

At the conclusion of his report, Dr. Stringfield requested guidance from the Council regarding these several matters and it was VOTED that the Chairman appoint a sub-committee of the Council to meet with the New England Council delegates to consider the above proposals and advise this Council as to their recommendations before the scheduled meeting of the New England Council in Boston on April 26, 1959. Dr. Feeney, appointed the following members to serve on this sub-committee: James R. Cullen and Michael R. Scully.

RECOMMENDATIONS FROM COMMITTEE ON PUBLIC HEALTH. (a) Dr. Wilson, Dr. Hart and Dr. Harwood joined the Council at this time and provided the Council with information relative to the establishment of a joint conference committee on staphylococcus and other hospital-acquired infections for the purpose of developing a Connecticut Plan for control of these infections. After considerable discussion, it was VOTED that Dr. Wilson and the Committee on Public Health make further study as to the purposes and functions of such a committee and be authorized to continue discussions with representatives of the State Health Department, Hospital Association, Yale School of Medicine, etc. and report back to the Council as soon as feasible with recommendations and for further consultation.

(b) Dr. Wilson made a request that the name of the Committee on Public Health be changed to the Committee on Public Health and Preventive Medicine. It was VOTED to refer this matter to the Sub-committee to Study and Revise By-laws.

(c) Relative to a request that the Committee be permitted to appoint official consultants, namely,

Dr. John Paul and Dr. Ira Hiscock of the Yale School of Medicine, it was VOTED that the Council approve the appointment of these physicians to act as consultants to the Committee on Public Health. A second matter relating to this appointment of a physician, who is not a member of the committee, to act as its secretary was unfavorably considered and it was VOTED that the Secretary's office provide secretarial assistance to the Committee on Public Health.

(d) It was VOTED to postpone action on a proposal that the Medical Society attempt to obtain funds from the legislature to provide a salary for the establishment of the position of Deputy Chief of the Medical Service Division at the Headquarters of Civil Defense.

PROPOSALS FROM COMMITTEE ON EYE CARE. Dr. Fasanella, Chairman of the Committee on Eye Care joined the Council at this time and requested the Council to consider the following matters:

(a) Recommendation of Dr. Henry Birge, Hartford, to the Eye Care Committee to replace Fred A. Wies of New Haven, resigned. It was VOTED to refer this recommendation to the Nominating Committee.

(b) Authorization of the expenditure of about \$300 to permit the Eye Care Committee to engage legal Counsel relative to certain legislative bills involving eye care matters. It was VOTED to authorize the Eye Care Committee to obtain legal counsel and to authorize the expenditure of up to \$300 for this purpose.

(c) The appointment of a member of the Committee on State Legislation to serve in an advisory capacity to the Eye Care Committee. No action was taken on this request.

REPORT OF COMMITTEE TO STUDY OPERATION AND ORGANIZATION OF JOURNAL. The final report of this committee had been distributed to the Council with the agenda. Since Dr. Nahum was not present, it was VOTED to postpone action on the report and recommendations, and to request Dr. Nahum to be present at the next Council meeting to discuss the report and that it be the second item on the agenda at that meeting.

NEW COMMITTEE TO STUDY RELATIVE VALUE SCALES. Pursuant to the directive of the House of Delegates on December 11, 1958, that the Council appoint a special Committee on Relative Value Scales, it was VOTED that the Chairman and Executive Secretary consider the composition and functions of such a committee and, after contact and consultation with the various sections of the Society, make suitable recommendations to the Council at a future meeting.

REPORT OF COMMITTEE TO STUDY DESIRABILITY OF EMPLOYMENT OF FULL-TIME EXECUTIVE SECRETARY. Dr. Feeney, Chairman of this Committee, submitted a report with recommendations and it was VOTED to postpone action at this time and to submit a copy of the report to the members of the Council before the next meeting.

CONNECTICUT MEDICAL SERVICE. Chairman Feeney reported that there had been no meetings of the negotiating sub-committees of the Society and CMS since the Council last met.

He informed the Council that the CMS Board is to be increased from 12 to 16 members but will maintain the equal representation of the Society and CMS by being composed of eight physicians, and eight lay directors.

As a result of this plan, the Council has been asked to nominate four physician directors to the Board for election at the CMS annual meeting in February, 1959. Two of these directors will serve for 2 years and two for 1 year.

The Council has been formally notified that the terms of office of Creighton Barker and Thomas J. Danaher expire at the annual meeting of CMS in February 1959.

On this basis, the Chairman declared the floor open for nominations and these were made as follows:

For 2 year terms:

Israel E. Blodinger, New Haven
Harold M. Clarke, New Britain

For 1 year terms:

Michael A. Dean, Bridgeport
Frank L. Polito, Torrington
Frederick A. Beardsley, Willimantic

The results of the Council's vote on these nomination showed that Drs. Blodinger, Clarke, Dean and Polito had been elected as the Society's nominees for the CMS directorships for the terms noted above and their names will be submitted to the Board of Directors of CMS.

Dr. Archambault was asked whether he was aware of any new developments since the negotiating sub-committees last met, and reported only that major medical coverage will undoubtedly have to be developed as part of either the present or future CMS contracts.

REPORT OF NOMINATING COMMITTEE. Dr. Feeney gave a report on the progress of the Nominating Committee, but since nominations had not yet been completed, no action was taken on the report.

CONFERENCE ON FEDERAL MEDICAL SERVICES, DECEMBER 1, 1958. The report of Dr. Harold M. Clarke,

representative of the Society to the Conference on Federal Medical Services, held in Minneapolis, December 1, 1958, was distributed to the members of the Council prior to the meeting. It was VOTED to accept Dr. Clarke's report with commendation and it was further VOTED to send copies of this report to members of the Committee on Third Party Payments, the Committee on Veterans Medical Care and the Advisory Committee to the Commissioners of Welfare, Finance and Control and it was further VOTED that the first two pages of the report be sent to members of the Committee on National Legislation and to Connecticut Representatives and Senators in the Congress of the United States.

APPOINTMENT TO STATE ADVISORY COUNCIL FOR CONNECTICUT HOSPITAL AND MEDICAL FACILITIES SURVEY AND CONSTRUCTION PROGRAM. On the recommendation of Dr. George H. Gildersleeve, Chairman of the Committee on Hospitals, the names of Clyde L. Deming, New Haven and Michael Shea, New Haven, were considered for this appointment. It was VOTED to appoint Clyde L. Deming to serve on the State Advisory Council to succeed Dr. Barker, retired.

BLUE CROSS. Dr. Feeney reported briefly on an informal meeting between himself and several members of the Council with representatives of Blue Cross. He stated that several matters of mutual concern were discussed and that he was hopeful that formal liaison may be established between the State Society and the Directors of Blue Cross in the near future.

JOINT CONFERENCE COMMITTEE. On the recommendation of Israel E. Blodinger, speaking at the request of the New Haven County Medical Association, it was VOTED that the Chairman appoint a committee of not less than five members of the Society which is authorized to establish liaison with the Connecticut Hospital Association to study the possible formation of a joint conference committee, which would have as its purpose the arbitration of disputes arising between members of the State Medical Society and member hospitals of the Connecticut Hospital Association.

The Chairman appointed the committee as follows:—Israel E. Blodinger, New Haven, Chairman; Jachin B. Davis, New Haven; William R. Richards, New Haven; Samuel A. Robb, Meriden; and Stevens J. Martin, Hartford.

DATE OF NEXT MEETING. The date of the next meeting of the Council was set for Thursday, February 12, 1959.

Threats to the Private Practice of Medicine*

It is indeed a pleasure and a privilege to be invited here this evening to report to you on some of the serious problems which must be faced by doctors in Connecticut and throughout the country. I can only report on the nature of these problems. Unfortunately, I cannot provide any ready answers to most of them. The proper attitudes of organized medicine toward these pressing matters must be developed at the grass roots level, formulated by the collective thinking of groups such as this, and transmitted in clear and unmistakable language to the responsible governing bodies of the county associations and the state medical society. As I suggested in the Secretary's Report to the House of Delegates last month, "It must be made impossible for anyone to justifiably contend that the elected officers of the medical profession have the power to express views which are contrary to those held by the majority of the entire membership."

At this point, I should like to read several excerpts from a letter sent recently by an English doctor to the Editor of the British Medical Journal. It was written in reference to certain legal actions taken by British physicians in an effort to improve their sorry lot under National Health Service. In it, he says, "The refusal of the Government to allow us access to the courts is surely the final proof that we can expect no justice until we can negotiate from strength. . . . No other body of employees has been treated in this manner for many, many years, and to submit meekly yet again is to yield more power to our overlords and accept the will of dictatorship. . . . these decisions were entirely dictatorial; the profession was not consulted, the merits of the case were not considered, and past promises were disregarded. We acquiesced, and the power of the Government over us grew with each submission, so that when we claimed that last bastion of democracy, a court of law, that too was denied us. Where do we go from here? One thing is certain—divided we fall. Yet so divided have we been that our leaders feel unable to take any major step without special conferences, referendums, etc., wasteful in time and in money. . . . But if our leaders could be assured of our support . . . then indeed they could negotiate as equals. In the end, we must choose: either we trust those we elected to lead our . . . profession or we abandon ourselves and all who come after us to the mercies of the politicians. . ." I should like to call your particular attention to the phrase, "No other body

of employees. . .", which so clearly indicates the position of doctors under socialism in Great Britain!

This is the message of a man who knows whereof he speaks, and it should make us stop and think before we again give voice to the unrealistic contention that "It can't happen here." It is evident that our medical colleagues in England continue to suffer from both apathy and disunity. It would appear that their medical societies had little strength with which to meet the onslaught of Socialism in 1946 and that they have even less now. Perhaps the course of events there was inevitable; perhaps it is equally inevitable that we will follow the same course here because it is certain that American doctors have all too often shared the apathy and disunity of their English counterparts. But it is still not too late for us to profit from their sad experience and, as responsible citizens, to set about doing our collective best to promote an awareness of the dangers which are besetting all Americans, not only the medical profession, but also most other segments of society.

That apathy can be effectively overcome was clearly demonstrated by the physicians of Connecticut during 1958. It was just a little over a year ago that we all met here, in this very building, to consider some extremely controversial matters which had arisen in regard to the policies and practices of Connecticut Medical Service. Soon thereafter, additional regular and special meetings at the local, county and state level were held. Despite the regrettable nature of the controversy, it was stimulating and reassuring to note the tremendous increase in attendance at these meetings; the obvious interest and enthusiasm of those who attended; and the desire of most doctors, long apathetic toward the business proceedings of organized medicine, to stand up and be counted at a time of crisis.

Physicians showed themselves willing to put aside personal differences of opinion in the interest of presenting a strong and united front against improper and unwarranted pressure from an outside agency. By so doing, they made it possible for effective group action to be taken, and I am pleased to report that this action is now paying dividends in bringing about the restoration of a proper and harmonious relationship between the members of the State Medical Society and the Blue Shield plan to which they give sponsorship. In the very near future—probably in late February—all members will be fully informed of the results of the negotiations in which their representatives have been engaged during the past four or five months. It is believed that these results will be considered basically sound and worthy of approval, but it remains

* Presented by William R. Richards, M.D., at New Haven City Medical Society Meeting, January 7, 1959.

for the entire membership to render the final verdict in this regard.

If the improved terms are judged acceptable, it is to be hoped that all Connecticut physicians will volunteer to actively support and participate in CMS, will offer constructive ideas and constructive criticisms through effective channels of liaison, and will strive to make the plan serve the proper interests of patients and doctors alike. By so doing, they will help to preserve the free practice of medicine, an achievement which will also be for the benefit of all concerned.

The CMS controversy, then, seems well on the way to being resolved and for this we can all be thankful. A chronic state of apathy toward our own affairs had caused us to drift into a very serious mess. It required a major upheaval in our medical organizations to get us out of that mess, and some extremely painful wounds had to be inflicted in the process. For these we should all be deeply regretful and we should also be sincerely hopeful that they will heal quickly and without permanent scars. But on the credit side of the ledger, let us all be thankful that this real and vital issue brought us to our senses before it was too late, and provided us with an opportunity to demonstrate that doctors can be aroused to act in their own defense, if given sufficient provocation.

One's sanity would be challenged if he were to suggest that it would be beneficial for us to be confronted with similar and equally controversial issues every month or two, in order that the tremendous impetus, developed as a result of the CMS situation, may not be rapidly dissipated; that we might somehow be kept charged up over one crisis after another, thereby sustaining the collective strength and unity of our profession which was generated in the year just past. Yet under such circumstances, apathy would be kept away from our doorsteps, as it surely must be if we are to survive and maintain firm control of our destiny in the changing social order.

But we need not create for ourselves any artificial problems for this purpose. They are being adequately provided for us by others—by powerful pressure groups which have gained great political strength in the November elections and are already boasting of having received a "mandate from the people". With this mandate as their authority, they intend to push for discriminatory medical legislation which, if unchallenged, could well bring our profession to its knees and enable presently creeping Socialism to stand up and walk.

For well over ten years, there has been a coalition of certain politicians, labor leaders and groups of government employees in America which has

conducted an active lobby in Washington for the purpose of urging the Congress to enact a compulsory national health insurance bill. These people have never been apathetic to their cause and have been hard at work even during the years when the going was toughest and the outlook least promising. We may now expect to see a resurgence of their activities in what they feel is a more favorable political atmosphere.

As an initial step, they will lobby for passage of the Forand Bill which completely discourages all personal and family responsibility by insisting that all recipients of Social Security and their dependents must be provided with every conceivable kind of health service, under government control and at government expense. All these people will have to accept this program on these terms, whether they need it or not; all wage earners will have to pay for it, whether they want to or not.

It is interesting to note that while the Forand Bill is now listed as the number one piece of medical legislation to be strongly supported by the socializers, members of the last Congress found it necessary to curtail the Medicare Program. Medicare embodies essentially the same principles as the Forand Bill but is operated to meet the medical needs of the dependents of military personnel. Curtailment of this program was felt to be necessary for one very important reason—it was costing the government much too much to operate. It was at first proposed to make a multi-million dollar cut in the Medicare appropriation, but when this was found to be impractical, a second plan was adopted which will attempt to reduce operating costs by restricting the services originally offered. This, in effect, denies civilian medical care in their own communities to many dependents who, by any stretch of the imagination, can possibly get to a military installation for such care. The operation of this Federal health agency has certainly left much to be desired in terms of economy, efficiency and stability. It seems highly unlikely that the hasty action taken to narrow its scope will benefit anyone,—the patient, the doctor of his or her choice, or the government itself.

The Veterans Administration, another Federal venture in medicine, presumably exists for the very worthy purpose of providing medical care for veterans of all wars who suffer from service-connected disabilities or diseases. Yet it has been under attack for decades as a network of expensive hospitals, some totally unnecessary, which are annually using up vast sums of the taxpayers' money for the treatment and hospitalization of patients whose ailments have not the remotest connection with their period of military service. It has been reported

authoritatively that the non-service cases treated at many of these installations actually outnumber those for which the program was established—often in direct and unfair competition with local civilian facilities.

Now, it is true that Medicare and the Veterans Administration do not constitute valid examples of health insurance agencies, because no premiums are paid by the beneficiaries. A compulsory national medical care plan, set up on a prepayment basis, would be something else again. But the fact still remains that the government has demonstrated no ability to operate either of these two programs efficiently, and there is certainly no reason to believe that they offer better medical or surgical care to patients than would be provided them in community hospitals, by private doctors. In general, they deny the patient free choice of physician and if, as some contend, the average person is unable to choose his doctor intelligently, he certainly gains nothing by having one selected for him. The physician in private practice assumes full responsibility for the care of his patient and the results of his treatment but, under any sort of closed panel arrangement, the seat of responsibility is often difficult to locate because its assumption is collective rather than individual.

Cost-wise, every extra dollar put into a voluntary plan is returned to the subscriber in greater coverage or additional service. But under federal operation, the necessary bureaucratic task forces, composed of thousands of offices and hundreds of thousands of clerks, eat up large chunks of the available operating funds, thus increasing the cost and decreasing the benefits.

It has been suggested by some that existing Blue Cross and Blue Shield plans, now functioning so successfully and expanding so rapidly, are tailor-made for transfer to operation by government. Based on the record of most federal business ventures, it must be devoutly hoped that no bureau will ever get its hands on these independent, efficiently run, non-profit agencies. The cost of medical care may be great under the present voluntary system, but it is difficult to understand why the proponents of socialized medicine continue to foster the idea that the per capita cost would be reduced under a bureaucracy.

On the local scene, we are aware of the demands for bloc representation of organized labor on the boards of directors of CMS and Blue Cross, and of the threat that if these demands are not complied with voluntarily by January 1st, legislation will be sought in the General Assembly to make such an arrangement compulsory. It is certainly desirable that all recipients of medical care have proper

representation on these boards, but for the purpose of reflecting the interests of the entire community, rather than the particular interests of any single segment.

Another labor activity which intrudes into the field of medicine is the establishment of, or the threat to establish, health clinics—perhaps even union owned hospitals—which will be operated under a closed panel system. In these plans, doctors are employed either on straight salary or are paid on an hourly or piece-work basis. Several groups of specialists in neighboring New England states have already been offered opportunities to bargain with union negotiators for the terms of their employment. These opportunities to bargain have been accompanied by thinly veiled threats that if the doctors do not agree to sign on as panel members, they may well not be able to continue practice in their own communities at all. Again, free choice of physician is denied and fee-for-service becomes a thing of the past. Those of us who were privileged to serve our country during wartime may logically conclude that this arrangement would be “just like sick call—only with better pay”. Now, the six hour day and the thirty hour week may represent ultimate goals for labor leaders, but such goals are not those of the medical profession. For the conscientious doctor, his working day ends only at midnight and a new one often begins without interruption of his work. There are no bonuses for his overtime or holiday labors, because the work of the doctor is not measured in hours but in service which, being of a highly individual nature, cannot be transferred to the hands of another for completion whenever a whistle blows.

Doctors have many sound reasons to believe that the great majority of their patients do not want socialized medicine in any form. Most patients are not aware of the philosophy or ideals of the people who are promoting such plans in their behalf or for what reasons. The rapid growth of the voluntary group health plans in recent years indicates that most Americans like the idea of prepaying their medical bills and preserving the right to choose their own doctors whom they know and can trust. Can it happen that these plans, offering so much in services at such modest cost, will somehow be discredited in such a way as to further the development of socialistic schemes which will offer less in services while imposing greater restrictions and regulations? Is it possible that the millions of satisfied subscribers to the voluntary plans can be persuaded to abandon them in favor of a compulsory program which would cost much more in the long run and, like Medicare, might have to be drastically curtailed because of operating deficits?

It appears that these things can happen and are possible, if the will of the social planners prevails. Regrettably, the apathy from which we physicians have suffered so long, has deprived the public of proper enlightenment in the field of medical economics. Such enlightenment should have come from doctors and hospital administrators and others who have devoted their lives to the business of providing medical care to rich and poor alike. We have permitted our rightful roles as leaders and educators to be usurped by people who are Johnny-come-lately's in this field. These people know nothing, and care little, about the grave problems which doctors encounter daily in working at the prevention, diagnosis and treatment of disease, but know much about social evolution, political pressure and labor-management negotiations. They are eagerly taking over the responsibility—so long neglected by physicians—for educating the public in these matters and are propagandizing their own system of instruction. Their system is far more concerned with dollars than with service; more concerned with pie-wedge statistics than with doctor-patient relationships; more concerned with the exercise of compulsion and regimentation than with the preservation of freedom and individual initiative. They insist that the skills of the professional man must be measured by exactly the same standards as those of the least trained laborer; that expert medical service must be bought and sold like groceries at so much a pound or so much a piece. Generally speaking, doctors' charges are perhaps the most realistic of all in our inflated economy, but this fact is being conveniently ignored by those who secretly aspire to change the philosophy of the American system of government. They are unquestionably following the plan laid down by Karl Marx many years ago, which recommends that the medical profession be socialized first, and that once this has been accomplished, the lawyers, the engineers, the architects and all others can be brought into line with scarcely a struggle. Possessing strong and efficient organizations of their own, disciplined to follow the leader, they are aware of the lack of similar strength and efficiency in the loosely-knit structure of medical associations, and they plan to exploit our weakness in this respect.

The opponents of the private practice of medicine are attempting to destroy the public respect which doctors have enjoyed for centuries. To accomplish this, they are contending that most physicians are cold and mercenary, and interested in sickness only as a source of financial gain; that a substantial number of medical men regularly render expensive and useless treatments to their glib and unsuspecting patients. They claim, also,

that much of the surgery performed in our accredited hospitals is entirely unnecessary and, to compound the felony, that the victims of this chicanery are charged fantastically exorbitant fees for these needless procedures. They are enlarging on the old saw that doctors bury their mistakes and imply that the disciplinary and censorship committees of medical societies serve no purpose except to whitewash the sins of their accused colleagues, whom they know to be guilty.

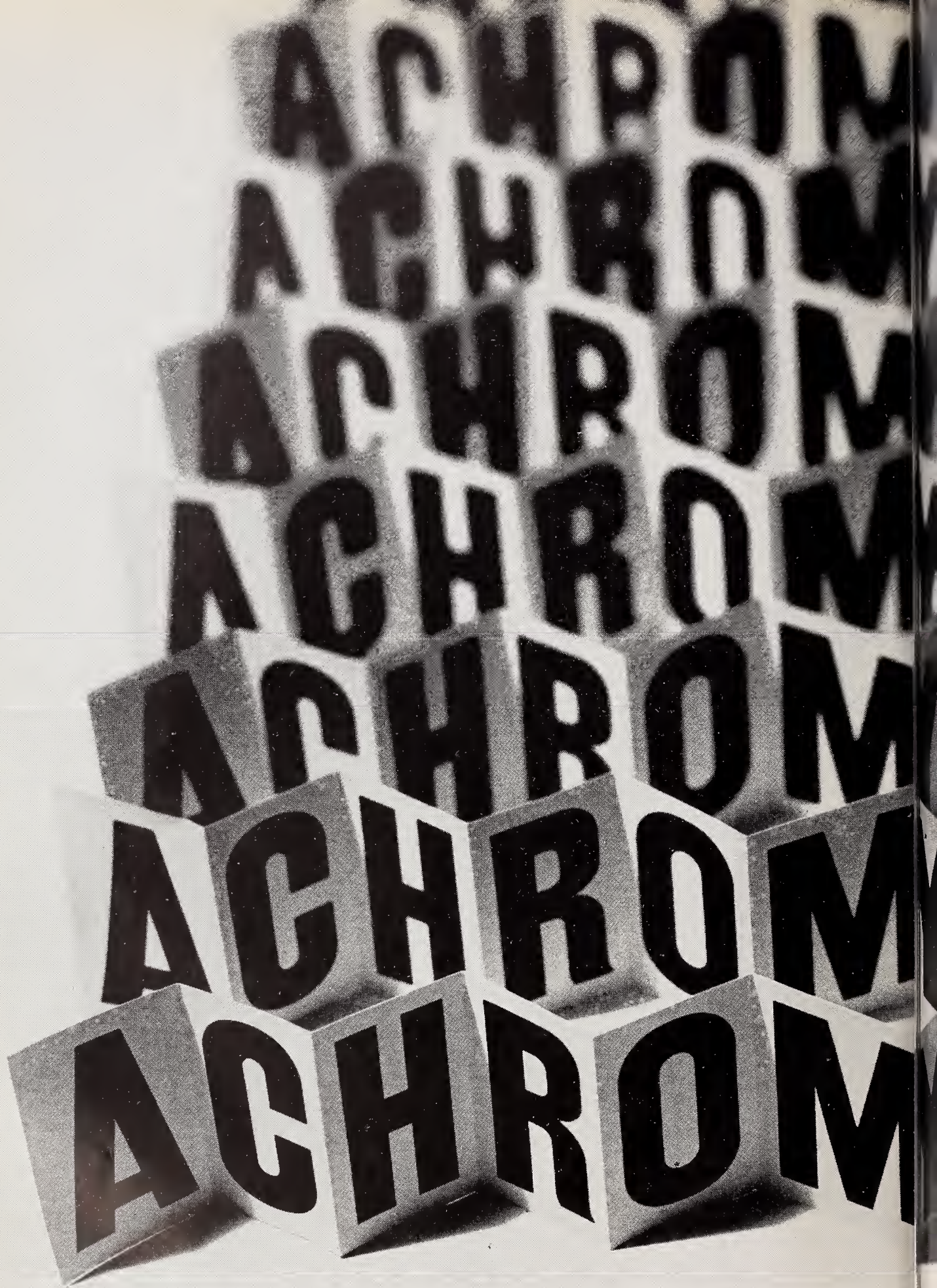
These are serious and distressing charges and, if any or all of them be true, we must set about rectifying each of them without a moment's delay. But, in all sincerity, neither we nor our patients believe that such sweeping charges of decay and corruption in the healing arts are true, and we must demand proof of such charges from those who make them. It would be ridiculous for us to contend that all doctors must be looked upon as sacred cows or that these are not a few bad apples in the medical barrel, but while comparisons may be odious, it is my belief that the secret files of our medical organizations can stand public scrutiny a whole lot better than those kept—and sometimes conveniently destroyed—by certain political and labor organizations. Let those who are so ready to heap abuse on our heads be absolutely sure that their own house is in order before they demand that the control of the affairs of medicine be transferred from medical hands, in which it belongs, to those of power-hungry politicians or labor leaders, in which it definitely does not belong.

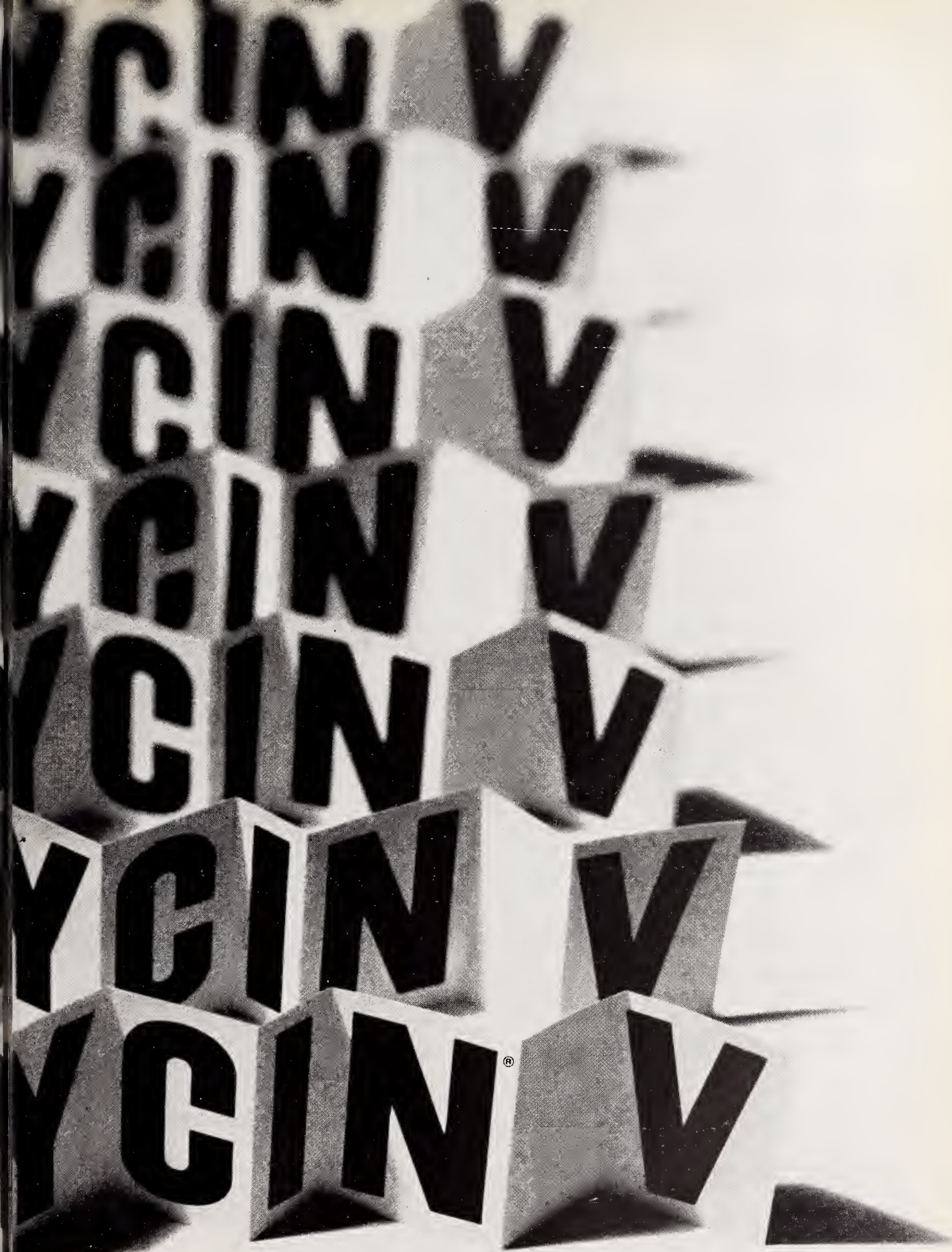
This, then, in some measure outlines the trend of the times as it is affecting the private practice of medicine in America. The impact of this trend is so great, even now, that several of the traditional concepts held for so many years by the American Medical Association appear to have been shaken. At the December meeting of the AMA House of Delegates, the following matters, among others, were referred back to the constituent medical societies for consideration, with a request that the opinion of the membership on these items be transmitted back to the House for review at its next meeting in June:

1. *Free Choice of Physician* — The question is asked: Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable and essential to good medical care without qualification?

2. *Closed Panel System*—The question is asked: What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?

(Continued on Page 102)





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3. *Care of the Aging* — The question is asked: Will you adopt the recommendation "That the AMA, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group (of people) over 65 with modest resources or low family income; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such . . . plans at a reduced premium rate."

What answers will Connecticut doctors give to these questions? Is "free choice of physician" really an outmoded fetish, as some are contending? Shall we grant the privilege of full membership in our medical societies to those doctors who defect to the enemy and, by their defection, contribute to the destruction of the private practice of medicine which we cherish? Is not our present acceptance of the service benefit principle in the interest of over half the people in this state enough to allow the voluntary plans to develop suitable prepayment contracts for the aged or must we go still deeper into the shadowy vagueness of those ill-defined financial categories, known as "modest resources" and "low family incomes"?

As I suggested earlier in this talk, the attitudes of the medical profession toward these and other important matters must be formulated by groups such as the New Haven Medical Society. I would also suggest that we meet more regularly, and more often, for this purpose. Hospital coatrooms provide many opportunities for doctors to convince each other of the soundness of their points of view, but deliberations held in these cozy hideaways, while often stimulating and heated, have little impact on the thinking of the general public and none whatever on the attitudes of our elected representatives in government. The official meetings of official societies are the only forums in which the business of the medical profession can be effectively transacted. Therefore, it is up to the governing bodies of all our component medical organizations to provide leadership in arranging and conducting such meetings. The AMA, through the State Medical Society, can only recommend actions. The smaller constituent groups may either take them or reject them. But this is our job, and no one else's, and if we fail to do it for ourselves, others less competent will do it for us.

Having determined sound policies and attitudes for themselves, the next big question is: How can physicians make their influence felt in this atmosphere of social and political change?

The other day, a doctor seriously suggested to me that our interests in the coming sessions of the General Assembly would best be served by the em-

ployment of a lawyer who could be recommended to the Society, on request, by the Chairman of the State Democratic Committee. He did not imply that the Chairman would make any such recommendation; only that the Connecticut State Medical Society should ask him to. This doctor is sincerely convinced that the testimony of physicians in their own behalf means little to the members of legislative committees unless their official, paid lobbyist is politically "right"; that the fate of all bills pertaining to health care will be decided not on their merits but on whether a political leader chooses to turn thumbs up or thumbs down when the final vote is taken. Such a philosophy is one of pessimism and defeat; one which raises a grossly unwarranted doubt as to the fundamental integrity of our legislators, of whatever party; one which could not be embraced by thinking physicians.

We could not buy the right to keep the practice of medicine free, even if we wanted to. The estimated wealth of all unions in 1956 was over 21 billion dollars and there is every reason to believe it is even greater today. In the recent "right to work law" campaign, unions spent more than two and a half million dollars in California alone to defeat this measure. If the "secret ingredient" in influencing medical legislation is money, our cause is already lost. I feel quite sure that none of us are ready to adopt such an attitude.

Again, since there are only about 250 thousand doctors in America, as against some 50 million eligible voters, it is highly unlikely that we could achieve our ends by political pressure at the polls. The treatment of disease is certainly non-partisan; it is neither Democratic nor Republican, nor even Laborite, and I hope we can still properly assume that the only effective way to influence the thinking of those entrusted with making our public laws is through sound advice and reasonable argument; not through amateurish attempts at political manipulation.

It would appear that we must rely more on sincerity of purpose than on emptying out our rather limited purse; that our energies must be directed more toward arousing and maintaining the interest of doctors in their own affairs, rather than toward creating a political party of our own.

As to legislative influence, on the national level we must rely largely on our AMA representatives to speak in our behalf. We must support them in any way we can and we must expect our state and county committees on national legislation to provide us with leadership in planning such support and making it effective to the absolute maximum.

On the state level, we must expect equal leadership and direction from our committees on state

legislation, but we must not expect the men on these committees to do this important job alone. Every physician in every city in every county in the state must make himself available to render assistance, whether he be asked to speak for or against legislation at a committee hearing or to approach a legislator whom he may know or who may live in his community, for a similar purpose.

Each doctor must be a public relations officer within himself, and wherever and whenever he can, he must promote the philosophy that the free practice of medicine, with all that the words imply, is the best system under which he and his patients can maintain mutual respect and receive mutual benefit.

As Tom Feeney, the very able Chairman of your Council, summed it up in his report to the House of Delegates, "In closing my report, let me urge upon you the necessity that you return to your constituents with a firm intent of arousing the physicians of your community to the demands being made of the profession—indeed, not only demands, but threats. If the lofty ideals of the free practice of medicine are to be sustained, many more physicians must be willing to make sacrifices of time and effort that go beyond those aspects of the practice of medicine which have to do with the office, the home and the hospital care of the patient. In short, I am saying that the twenty-seven members of the Council, and the members of this House of Delegates, cannot do the job at hand alone. We need the help of each of the over 3,000 physicians of the State."

Meetings Held in February

- 4 Sub-committee on Nutrition
- 12 Public Health Committee
Nominating Committee
Council
- 18 Committee on Perinatal Morbidity & Mortality
Committee on Maternal Mortality & Morbidity

Institute Cites Growth of '58 Health Insurance

Prepaid health coverage of all types maintained a good rate of growth in 1958, according to Health Insurance Institute, New York. Total health care benefits estimated at \$4.8 billion were paid out, compared with \$4.2 billion in 1957. At year's close, some 121 million persons held greater or less protection against doctor and hospital bills through company policies, membership in the Blues, affiliation with industrial health care plans and other types of coverage.



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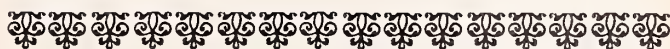
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Abstract Of Report Of The Committee On Aging Of The A.M.A. Council

Quite naturally the A.M.A. and its component associations have since their inception interested themselves in the quality of medical care of the public, and also have spent much money and effort in study and research on the socio-economic aspects of medical care.

In 1949 a commission on chronic illness was appointed. In 1955 a committee on geriatrics came into being and finally the committee on aging in the A.M.A. Council on Medical Service.

The purpose of this committee is to obtain greater knowledge of, and suggest solutions to the problems of administering adequate medical care of our elder citizens. The association is particularly interested in the problems of aging in their medical aspects, but at the same time is unwilling to avoid study of the socio-economic features. It strongly advocates that the profession co-operate whole heartedly with all pertinent segments of our society, public and private, to the end that a well coordinated program come into being. The initial stages of such a program requires much research, study, and coordination by many bodies social and paramedical, and even political. The leadership of the A.M.A. is evidenced in a pamphlet by the Council of Medical Service aptly called "Medicines Blueprint for the New Era of Aging." This expression may connote some revolutionary format in the approach to medical care of the aging and aged, yet it is a continuing process grown out of a long standing interest in general medical care.

Increase in longevity presents a present and anticipated further increase in the number of our citizens, sixty-five and over, and calls for added attention to special social, economic, psychological, physiological, and occupational problems making imperative a study by several pertinent groups in society.

Realism decrees that preparation for old age begin in youth. This calls for both individual and community action, because the problem is for everyone. It calls for an examination of daily living in the light of factors that apply to the individual in particular and to all persons in common.

The committee on aging has offered a six point program to be immediately initiated at all levels of medicine in particular, and society in general as follows:

1. Stimulation of a realistic attitude toward aging by all people.

2. Extension of effective methods of financing health care for the aged.

3. Expansion of skilled-personnel training programs and improvement of medical and related facilities for older people.

4. Promotion of health maintenance programs and wider use of restorative and rehabilitative services.

5. Amplification of medical and socio-economic research in problems of the aging.

6. Leadership and cooperation in community programs for senior citizens.

This brochure is available in limited numbers now and will be more generally supplied at a later date, by applying to the Council on Medical Service, A.M.A., 535 North Dearborn Street, Chicago 10, Illinois.

Implementation of this six (6) point program depends on the coordinated efforts by organized medicine at all levels, varying only according to the local available resources. It is important to realize that each physician should give it full support. This is because the medical profession as always must reaffirm in our day the idea of the dignity of men and their worth, and responsibility of individual and family.

After regional meetings representing all the states and after obtaining ideas from all areas, the House of Delegates at its June 1958 meeting adopted "Suggested Guides for Medical Society Committees on Aging." This fostered a Planning Conference sponsored by the A.M.A. held at Drake Hotel Chicago, on September 13 and 14, 1958 at which 47 states were represented, and 27 State Boards of Health and U.S. Department H.E.W. in the person of Leroy E. Burney, M.D.

The consensus of opinions represented at that meeting was that it is imperative that an immediate start be made on this project in view of the contributions that are anticipated which will be presented at the White House Conference on Aging to be held in early 1961. It will be necessary that state conferences be held in anticipation of this White House Conference and that organized medicine participate fully in the deliberations.

To get this, "off the ground" the committee on aging of the Council on Medical Service of the A.M.A. suggested "Guides for Medical Society Committees on Aging" which was accepted and pro-

mulgated by the House of Delegates Meeting in June 1958, copies of which are available from the same source as the brochure mentioned above.

The suggested activity includes:

I. Purposes

The purposes of the medical society committee on aging might well be divided into three parts. In reference to "aging" the purposes should include:

1. To study various aspects of the problems of aging, particularly as they relate to the provision of medical care;

2. To initiate programs and activities which will provide the medical profession with pertinent information from such studies; and

3. To assume a leadership role in research and in adding to community understanding of the aging process and its implications to the individual. In reference to the "aged" the purposes should include:

1. To be informed on the problems which exist or may arise in the area;

2. To initiate activities, or cooperate with other groups in activities, designed to meet these problems;

3. To inform the profession and the public of these problems and activities and of their responsibilities in this field.

It further explains the constitution of the membership of the committees and format for smooth "modus operandi."

It suggests a tenure of membership that permits a continuing experience in any of the particular areas of activity. It further suggests the frequency of meetings to be determined according to local needs. Also, it suggests the substance of discussions as follows:

1. Review the activities of other organizations in the area having to do with aging and the aged.

2. Establish liaison with such organizations and offer to advise them on the medical aspects of their programs.

3. Cooperate with other organizations in improving health care services and facilities.

4. Inventory the medical and related facilities and services available to the aged, such as nursing homes and homes for the aged.

5. Initiate or cooperate with other organizations in the development of a central agency designed to supply information on facilities and services available to the aged.

6. Study the various mechanisms which aid in financing the medical and related services required by the aged.

7. Seek to arouse the interest of both physicians and the public in the problems which confront the aged.

8. Cooperate with management and labor in exploring the entire area of employment—retirement and reemployment; particularly from the viewpoint of the medical aspects (physical and mental).

9. Develop a speakers' bureau designed to provide information both to the medical profession and to the public.

10. Report on your activities to the A.M.A. Committee on Aging.

Within the profession it suggests that membership include a general practitioner, and practitioners interested in cardiovascular deterioration, cancer, arthritis, and rheumatism, and mental disorders. Then in the paramedical field it is considered important to enlist the aid of rehabilitation, public health, nursing home organizations, community planning, and home care programs as well as specific research problems in the schools and hospitals. Lay persons representing the community at appropriate times should be asked and encouraged to partake of conferences.

A working draft of the American Medical Association's Positive Health Program For Older Citizens was used as a discussion guide. This Positive Program is based on six points which call for:

1. Stimulation of a realistic attitude toward aging by all people.

2. Promotion of health maintenance programs and wider use of restorative and rehabilitative services.

3. Extension of effective methods of financing health care for the aged.

4. Expansion of skilled-personnel training programs and improvement of medical and related facilities for older people.

5. Amplification of medical and socio-economic research in problems of the aging.

6. Cooperation in community programs for senior citizens.

From this approach it is evident that the profession feels that many segments of our society of right should be actively and positively interested in this broad program, because of the various fields it involves. Some are listed here to show the many facets of such a program: The U.S. Public Health Service and H.E.W., The Natural Hospital Associations, State Governments, particularly Health and Welfare Departments, National Social Service and Welfare Associations, The National Association of Medical Colleges, and various foundations that stimulate research in the schools and hospitals,

Our large Pharmaceutical Companies, The Colleges having courses in sociology, psychology, and social service; Trained personnel in community positions mobilizing programs for our senior citizens, Veterans Organizations, Labor Organizations, people in the expanding fields of socio-economic research, Insurance Companies both voluntary non-profit and commercial; Industry—All in a positive Health Program with its numerous facets, a program from which no one is immune.

REPORT OF THE SPECIAL COMMITTEE TO CONTINUE TO STUDY PREPAYMENT PLANS

Ellwood C. Weise, Sr., *Chairman*

Frank K. Abbott	John N. Gallivan
Max Alpert	Francis Gallo
Joseph Becker	John P. Gens
Harry Bellach	David A. Grendon
Israel E. Blodinger	John F. Hughes
Max Caplan	Leo G. LaPalme

Henry Sherwood

The Special Committee to Continue to Study Prepayment Plans came into being at the House of Delegates Meeting on July 22, 1958, but its composition was not completed until August 14, 1958. It held its first meeting just 13 days later, on August 27, 1958. The intervening time was not lost. Much ground work was being developed by the various members through informal conferences, interviews, and the assembling of data. This facilitated progress from our first meeting onward in the study of a most extensive, highly complex and ever changing problem.

At subsequent meetings your committee and various members of it conferred with representatives of the Health Insurance Council, with representatives of many of the larger insurance companies and with other individuals interested in this problem. Contact by phone and by letter has been made with Blue Shield representatives, physicians and chairmen of related committees in other states.

Efforts were made to determine the trend of thought in the AMA by observing comments made by its high officials.

Dr. David B. Allman, the immediate past president of the AMA, at the annual meeting of the Health Insurance Association of America on May 8, 1957 said, "The application of voluntary health insurance, whether service or indemnity, to the financing of medical care has always been supported by the AMA. . . . It (the AMA) has repeatedly expressed its vigorous support of the health insurance industry as well as the Blue Shield plans".

Dr. Gunnar Gundersen, president of the AMA stated on October 23, 1958 in Hartford at a meeting of the Association of Life Insurance Medical Directors of America, that there should be "a co-operative venture of voluntary insurance plans, doctors, hospitals and patients". . . . It is too late to ask, "What is the other fellow doing? The insurance industry has the know-how and AMA has much help and data to offer, especially to insure those of age 65 and over". He further stated, "the AMA is gratified that five large insurers indicate no loss of physician-patient relationship and that fees can be taken care of by relative value scales and guides".

Furthermore, "On the matter of costs, perhaps none of us has been entirely blameless, and I include doctors, hospitals, insurers and patients".

"Medicine and the insurance industry cannot survive, one without the other. As insurers I believe that your companies can write contracts that will discourage extravagance and over-utilization" of health insurance coverage.

Dr. E. B. Howard, assistant executive vice-president of the AMA, said, "voluntary health insurance and prepayment plans (the Blues) can and should provide the basis for meeting large health care costs for most people, including the aged".

The policy trends are quite apparent as expressed by these gentlemen. In all of these quotes or statements one sees emphasis put on not only the pre-paid medical care plans of the BLUES but also on the voluntary plans of the health insurance industry. The senior citizen likewise comes in for his share of consideration.

Recently the AMA has taken steps to cooperate with the (commercial) insurers in developing a more expanded and effective voluntary health program with special attention to needs of people over 65. The Board of Trustees has appointed five of its members to meet with insurance company presidents from the Health Insurance Council. The Council on Medical Service's Committee on Insurance and Prepayment Plans of the AMA voted to establish similar liaison with technical experts from the Health Insurance Council (representing the commercial health insurance industry) and with the Blue Shield medical care plans, the Blue Cross Commission and representatives of lay sponsored prepayment plans.

Many members of your committee have, as long ago as February and March of 1958, consulted with representatives of the insurance industry, and with the Health Insurance Council (the official representatives of the insurance industry) since August, 1958. Your committee, without the prior knowl-

edge that the AMA was working along similar lines of philosophy, now finds that, Dr. Louis M. Orr, president-elect, in discussing the formation of the AMA-Health Insurance Council Committee, stated it was a natural outgrowth since the two groups share common "ideas, ideals and philosophies".

On July 29, 1958, the State Society through its Executive Secretary, Dr. William Richards, received a letter from Kenneth F. Brandon, M.D., Chairman of the Connecticut Medical Relations Committee of the Health Insurance Council. This letter expressed the desire to inaugurate discussions between the insurance industry and the physicians of Connecticut by orthodox procedure. He also suggested that the Chairman* of this committee and later the committee as a whole meet with Dr. Brandon and with representatives of the insurance industry.

Following Dr. Brandon's suggestion, the chairman of this committee met informally with Dr. Brandon on Saturday, August 9, 1958. Your chairman invited Dr. Alpert, (Chairman of the Committee on Third Party Payments) to sit in on the meeting and Dr. Brandon invited Mr. L. A. Orsini (vice-chairman of the Health Insurance Council) to be better able to answer any questions we might wish answered. It was insisted on both sides, at that time, that the conference be strictly informal and of an educational and informative nature.

As a result of the above mentioned meeting, the regular committee meetings and joint meetings with representatives of the Health Insurance Council and the commercial insurance companies, considerable material and valuable information was assembled.

The phenomenal growth of all voluntary health insurance plans has been fantastic during the past 20 years, and particularly during the past decade. As of the beginning of 1958 approximately 123 million persons have some form of hospital expense coverage. Twenty years ago, less than five million Americans had a varied surgical expense coverage, while today the figure has moved up to about the 111 million mark. The three million people who were covered by some sort of basic medical expense protection twenty years ago have now approached the 74 million figure. It is therefore quite obvious that the vast majority of our people desire adequate financial protection against the expense of sickness or accident.

The study of this committee has been concerned primarily with the medical-surgical coverage as de-

veloped under our free enterprise system by voluntary health insurance programs offered by the commercial insurance companies and those operated by the Blue Shield prepaid medical-surgical care plans.

The usual methods of paying for benefits under these programs are familiar to you. They may be called service benefit payments, contract allowances or indemnity payments.

Service Benefit type of payment is the acceptance by the participating physician of the fee specified by a Blue plan as the total charge to the member and is provided when the annual income, as related to the plan, does not exceed the limits in certain categories.

Contract allowances in the Blue plans in general are essentially made on an indemnity basis when the annual income, as related to the plan held by the member, exceeds certain specified limits. The participating physician may accept this allowances as full payment or he may make such additional charges as he feels justifiable or reasonable for the professional services rendered. The non-participating physician naturally treats these payments as indemnities and makes additional charges as his judgment dictates. Indemnity payments are based on agreements in which a fee schedule or a relative value scale is set up by a medical organization for application to all persons and may be used as a guide for the commercial insurance companies or the Blue Plans except to those persons who are medically indigent.

These fee schedules, with the exception of those where the Relative Value Scale is used, are considered by some physicians to be too rigid. They believe that greater flexibility can be accomplished by introducing Relative Value Scales to compensate for experience, training, locale, or other factors which might raise the question of an inequity.

Five states (Nebraska, California, Iowa, Montana, and Kansas) have adopted relative value scales. For about three years, the AMA Committee on Medical Practices has been conducting a study of relative value scales and some predict that the end result will probably be a national relative value scale covering medical, surgical, radiological, pathological, etc. procedures in a single, integrated scale. The latest state medical association scale (Kansas) is a single integrated scale in contrast with the California system wherein there are actually four different scales (medical, surgical, radiological, and pathological).

A relative value scale allots a certain number of points to a given procedure on the basis of its worth in relation to other procedures. To use such a scale, a physician begins by putting his own dollar value

* The Chairman, at that time, was Chairman of the original committee of five, which was enlarged to form the present committee.

on a basic procedure (perhaps one that rates a single point). To determine charges for other procedures, he multiplies their point values by the dollar value he has given a single point. Proponents of a relative value system emphasize that the scale is not intended to standardize fees but to standardize relationships among them. It would in no way set anyone's fees or anyone's schedule of fees. Such a study or scale is in no sense a fee schedule. In effect it is a guide only, and could be used by physicians (to evaluate their own fees), the people who purchase protection, the Blue Shield prepaid plans as well as the regular health insurance industry.

In proceeding along a somewhat different line in its study, the committee was informed by representatives of the insurance industry that they are competing daily with the Blue plans and are catching up with them. Employers like the flexibility offered by commercial carriers because the employers can then present at the bargaining table a plan which is the employer's own concept and not just something which is available throughout the community. There is a place for both the Blues and the commercial companies in the health insurance field according to the opinion of the latter. However, it might be appropriate at this time to mention that this very flexibility plus experience rating of the commercial plans in group coverage might well skim off the cream covering only the best risks. This would in time place the Blues in the precarious position of holding a disproportionate share of unfavorable risks and in turn would result in a disadvantage to non-group subscribers, the retired and those persons past age 65.

Another opinion of one of the representatives of the insurance industry was that the uncertainty of medical care costs does constitute a handicap for the commercial carriers in competing with Blue Shield plans when the medical societies give to a high percentage of Blue Shield subscribers guarantees of maximum fees while giving no such guarantees to people who pay their own medical care bills out of their own pockets or through commercial contracts. Moreover, he added, "Actually, the medical society is discriminating in favor of Blue Shield subscribers and against those who want commercial plans".

The same insurance industry representative suggested, to avoid such discrimination, that the medical society set up fee schedules, applicable to both the insurance industry and to the Blue plans, which show the maximum charges which would be made for procedures for persons within a specified income range. The medical society members would then agree to honor these maximum amounts in the absence of a separate agreement between the physician

and patient in a particular case. Any such schedule or schedules should be developed by the medical society and not by insurance companies. Moreover, the medical society members would not need to sign agreements with insurance carriers but would inform the public, including insurance carriers, with respect to the schedule or schedules they have set up. Furthermore, in regard to premiums it was developed that it is not realistic to talk about a single plan of insurance for a single price to be written by several carriers for community-wide sale; such a scheme might well involve anti-trust actions.

After listening to much information presented by the insurance industry, your committee was sympathetic to their views. However, the committee found it difficult to visualize an overall workable association between the State Society and the commercial carriers with whom it would have no agreements, in whom it would have no representation and over whom it would have no control.

In the course of rapid socio-economic changes and particularly in view of the recent local and national political trends it becomes apparent that certain areas of coverage are drawn into sharper focus. They therefore deserve our consideration for comparison under the commercial and Blue plans.

The first of these areas involves the problem of "lay-off" of the participating employee in an enrolled group in a commercial insurance plan. It would appear that any medical-surgical benefits due the employee or his covered dependents would cease automatically at the end of the period for which his contributions have been paid. This period may vary anywhere from 31 days in some commercial plans to three months or even rarely to one year in others (such as the G.E. type of plan) if the subscribing employee continues to make his monthly contributions. If the plan of the employed group is a negotiated one, then the former employee may have the right to exercise his option to convert to an individual rate. There seems to be a lack of uniformity concerning these options.

In case of "voluntary termination" (i.e., if the employee leaves his job) the insurance as a rule would terminate on the day he leaves his job or very soon thereafter. However, in the contracts of approximately 50 per cent of the commercial carriers the former employee can usually convert to the individual rate if he does so at once or within 31 days.

Now as to "termination of employment" from an enrolled group in CMS. It makes no difference as to whether the termination was voluntary or involuntary. If the "membership was active on the termination date, an option will be extended to the member for the continuation of membership on an

individual basis". This is accomplished by "Automatic Continuous Membership Option" coupons which the former employee can send in with his contribution at the regular group rate for two months (not including the grace periods). The third coupon covers a three months premium and converts the member to direct payment status.

The second area involves the problem of retirement or attainment of age 65. Some commercial carriers terminate medical-surgical expense insurance at age 65, but these contracts appear to be on the decrease since the Forand Bill was first proposed.

Other commercial carriers continue a portion of the medical-surgical coverage either in reduced amounts in dollars or more commonly by limits in time such as 120 days in any one calendar year. Still other plans (such as the G.E. type plan) will provide coverage for the husband and wife for the rest of their life providing the insured was covered under the plan or any prior company plan for 10 years or more. However, here again the amount is limited, usually to a total of \$1,000.00 for an employee and his wife with at least 10 but less than 15 years of service, and \$1,500.00 in the case of an employee with 15 or more years of service. The employee after age 65 pays no premiums on this latter plan. If at age 65 the employee has had less than 10 years of service or is otherwise ineligible for the \$1,000.00 or \$1,500.00 benefits just described the employee may apply to the insurance company at an individual rate. No medical examination will be required if application is made within 31 days after age 65 is reached.

Subscribers with CMS after attaining age 65 or retiring, who were members before 61 can retain the same CMS benefits (full coverage with no age limit) regardless of age if they take advantage of membership options for lifetime coverage. However, they do have to pay premiums at the full individual rate (i.e., direct pay) except in a few negotiated contracts with the employer where part of the premium is taken out of the retirement fund. Therefore, in this area the Blue plans (CMS) offer a distinct advantage of full coverage with no age limit.

Many of the desirable features of medical-surgical plans offered by the commercial insurance companies and the Blue prepaid plans are retained in Group Major Medical Expense Plans designed to replace base plans. In these major medical forms a \$25.00 or \$50.00 deductible is incorporated as is so commonly done in deductible automobile collision insurance projects. The addition of co-insurance features for greater protection against over utilization is also frequently included to reduce cost. Stu-

dents of prepaid insurance plans state that the greatest economy is achieved by plans using the deductibles and co-insurance features when the subscribing employee shares in the payment to the extent of 20 to 25 per cent in contrast to first dollar coverage. Though labor may not as yet be prepared to accept these plans as readily as the standard and preferred plans of the commercial insurance companies and the Blue plans respectively, they are however being sold in constantly increasing numbers. Of five major types of health insurance, major medical showed the greatest gain (89 per cent) in benefits paid in the first nine months of 1958. It would seem that this type of plan will deserve our closer scrutiny and increasing consideration in the not too distant future.

After careful study of all the facts at hand concerning the possibility of the establishment of a prepaid medical-surgical care type of plan with the commercial insurance companies, your committee is of the opinion that some areas of coverage did not meet certain standards which we had hoped to attain. Furthermore, once the Society had given approval or tendered sponsorship of plans which would be marketed by any, several or all commercial insurance carriers, it was difficult to see in what manner we could maintain effective liaison and enforce adequate control over so large a body of legally separate and competing corporations.

On the other hand, in dealing with one of the Blue corporations, the committee was of the opinion that the above obstacles could be more readily obviated. This has been all the more evident since the settlement of the basic controversy concerning the power of recall of our representatives on the Board of Directors of CMS. With the atmosphere of friendly co-operation pervading the negotiating committees meetings much progress toward the development of a solid foundation for a harmonious relationship is being developed. This is evidenced by by-laws changes, the establishment of specific terms of office for board members, the re-organization and re-naming of the Professional Policy Committee (possibly to be called the Medical Advisory Board), with proportionate county representation and additional members jointly nominated by Connecticut Medical Service and a Council Liaison Sub-committee. In addition, certain members of the Medical Advisory Committee will be designated as a claims committee; also a permanent liaison committee as a sub-committee of the Council will function to acquaint and advise the Board of Directors relative to the medical standpoint of deliberations.

After the above-mentioned studies, reviews and

discussions, the Committee members present unanimously supported the following conclusions:

(1) The Committee endorses and supports the principles of prepayment for physicians' services.

(2) The Committee believes, as a result of the progress of negotiations between the liaison committees of CMS and the Council, that the establishment by the Connecticut State Medical Society of a non-profit prepayment medical service corporation separate and distinct from CMS would not be, at this time, in the best interests of the citizens of Connecticut nor of the members of the Society. (Plan II described in outline to the House of Delegates at its special meeting in July 1958 in the report of the Special Sub-committee of the Council on Prepayment Plans.)

(3) The Committee believes, from what it has learned of the progress of negotiations between the liaison committee of CMS and the Council, that the outlook is good for improvements in the service which CMS can render to the citizens of Connecticut and to the members of the Society and that with such improvements, CMS will deserve the active support of the Society.

(4) The Committee believes, on the basis of its studies, that the development of a single combined service-benefit and indemnity plan to be underwritten by any, various, or all state-approved commercial insurance companies would not be desirable at this time. (Plan I presented to the House of Delegates in July 1958 by the Special Sub-committee of the Council.)

(5) The Committee believes that, in addition to the strengthening of CMS, by improving its relationship with the Society, there is a need for stimulating and assisting commercial insurance companies to increased participation in the voluntary health insurance movement especially in the direction of providing opportunities for greater coverage of senior citizens and the disabled, among others.

(6) The Committee believes that the Society should take immediate steps to provide its mem-

bers with up-to-date information about relative value scales and that a committee assigned such a duty might well be assigned also the duty of drawing up a prototype of a relative value scale which might best serve the needs of the citizens of Connecticut, the insurance companies serving Connecticut, Connecticut Medical Service, Blue Cross and the members of the Society.

The Committee therefore recommends:

- (1) That a Special Committee on Relative Value Study be formed to
 - (a) provide the members of the Connecticut State Medical Society with up-to-date and continuing information concerning relative value scales, and
 - (b) draw up a prototype of a relative value scale which might best serve the needs of the citizens of Connecticut, the physicians of the county and state medical associations, Blue Shield, Blue Cross and the commercial insurance companies, and
- (2) That the Connecticut State Medical Society actively support Connecticut Medical Service in view of the progress of the deliberations between the liaison committees of Connecticut Medical Service and the Council, and in the light of information developed by the studies of your committee, and
- (3) That the Connecticut State Medical Society encourage assistance and stimulation to commercial insurance companies to increased participation in the voluntary health insurance movement, especially in the direction of providing opportunities for greater coverage of senior citizens and the disabled, among others, and
- (4) That the Special Committee to Continue to Study Prepayment Plans be discharged.

Respectfully submitted,

ELLWOOD C. WEISE, SR., M.D.

Chairman



ANNUAL REPORT FOR THE YEAR 1958

Copies will be widely distributed following the Annual Meeting on February 17, 1959. Additional copies may be obtained by writing or calling:

CMS
Public Relations Department
Box 1930
New Haven, Connecticut

In 1958 over 260,000 claims for the services of physicians were processed and paid through CMS, another record year for increased claim payments.

In 1958 the number of Connecticut physicians who are associated as CMS Participating Physicians has again increased giving continuing evidence of the medical profession's sincere desire to help the people of Connecticut obtain "the best possible medical care."

Through CMS, over 1,000,000 people in Connecticut who are CMS members enjoy the advantages of a voluntary medical prepayment plan made possible by the physicians of Connecticut.

CONNECTICUT MEDICAL SERVICE, INC.

The Blue Shield Plan for Connecticut



REPORT OF CHAIRMAN OF THE COUNCIL

Semi-Annual Meeting—House of Delegates, December 11, 1958

It is a great pleasure to report on the affairs of your society as they have been conducted by your Council since the last meeting of the House of Delegates.

The Council has been meeting frequently, at least once each month. The meetings have been long and fatiguing—taxing the stamina, both mentally and physically, of your representatives. The frequent use of subcommittees of the Council has enabled the Council to cover much ground. I know of no occasion when problems of such magnitude as are now under discussion by your Council have had to be faced squarely and solutions arrived at which will irrevocably determine important phases of professional medical practice in this state.

The principal concern of your Council since the House last met, has been the re-establishment of the relationship between the State Society and CMS which had been envisioned when the doctors of the State started the voluntary non-profit medical service plan. I am pleased to report that I believe this objective has been reached. Sponsorship by the State Medical Society of CMS is continuing because on August 28, 1958, the Chairman of the Council received a certified copy of a CMS bylaw change restoring to the State Society its power of recall of physician representation on the Board of Directors of CMS. The by-law change reads "The Council of the State Medical Society may, at any time, obtain the resignation of any future physician Director, provided this action be taken for stated cause and that it be supported by at least two-thirds of the entire membership of the Council." Terms of office have been established for both lay and Medical Board members. The action of the Chairman of the Council in accepting the modification in CMS by-laws has been endorsed by a unanimous vote of the Council.

A vital part in the negotiations between CMS and the State Society is being played by the National Blue Shield Medical Care Plans, especially its Executive Vice-President, Mr. John W. Castellucci, who had attended all the meetings. Mr. Castellucci's extensive experience and generous advice is of inestimable value to both parties. The major organizational changes in CMS, in its relationship to the State Medical Society, have followed clarification of principles guiding Blue Shield Medical Care Plans.

A sub-committee of the Council has been meeting regularly with a similar committee of the Board

of Directors of CMS and Mr. Castellucci. Four meetings have been held and the meetings will continue. Our last meeting was held on November 18, 1958, two days prior to the last meeting of the full Council on November 20, 1958. The Professional Policy Committee is being completely revised and in the future will be called, The Medical Advisory Committee. Better county medical society representation has been provided for and in addition a mechanism is set up for representation of all specialty divisions in the practice of medicine. A permanent liaison committee between the Council and the Board of CMS has been provided and this liaison committee shall jointly select some supplemental appointees to the Medical Advisory Committee. Other organizational matters are under discussion but those I have mentioned are the most important.

The National Blue Shield Medical Plans negotiators in their recommendations state that equal in importance to the restoration of the power of recall of physician representation on the Board of Directors of CMS is the restoration of the original principle set forth by the Connecticut State Medical Society providing that service benefits should be available to *at least 50 per cent of the population* served by the plan. This principle was changed by an action of the House of Delegates in March 1958, at which time it was specified that service benefits shall be available to *not more than 50 per cent* of the population. By vote of the Council, it will be recommended at a proper time, to the House of Delegates to revert to the original principle of 1948.

The Board of Directors of CMS have been informed of the action of the House of Delegates of April 1958, and by which action the Council is bound—"that any proposed changes in contract or proposed new contracts be submitted in complete detail and in final form to each component county association for action prior to submission of same to House of Delegates for approval and prior to submission to the State Insurance Commissioner for his approval. While on the subject of approval of CMS contracts I wish to recommend that this House of Delegates today approve the Preferred Contract inaugurated some time ago but as yet not having the formal approval of the House of Delegates.

Confidence of the Council in the Board of Directors of CMS, sincerity and cooperation had led to the Council voting to have the three members of the Professional Policy Committee who had submitted their resignations but whose resignations had not been acted upon by the Council—to re-

sume their positions on the Professional Policy Committee.

The House of Delegates meeting on July 22, 1958, having received a preliminary report of a special committee to study prepayment plans, requested the continuation of that committee. This committee was given by the Council an indefinite extension of the 60 day limit for the study set by the House of Delegates action. Today you will receive the recommendations of the committee which has worked untiringly under the capable chairmanship of Dr. Ellwood Weise, Sr. In its original recommendation to the House for a committee of this type the Council was hoping to develop a group of physicians well informed on all aspects of health insurance, non-profit and commercial. A reading of the report of the committee indicates we have the informed group we sought.

During the later part of October the Council became aware of a resolution pertaining to CMS and Blue Cross, passed at the State Convention of the CIO-AFL, the resolution reads as follows:

"This convention goes on record as requesting that CMS voluntarily change its by-laws to provide a new set-up in its Board of Directors so that 50 per cent of its membership shall be from those com-

munity interests which are essentially the consumers of the services offered by CMS; and to provide further recognized spokesmen for organized labor."

"If no action has been taken by the CMS Board of Directors to grant this request by January 1, 1959, legislation be sought in the next session of the General Assembly to require that any organization operating in the State of Connecticut which offers insurance against hospital care or medical expenses on a so-called non-profit basis shall be required to so constitute its Board of Directors that at least one-half its members represent consumers of the services which are offered; and further provided that of the consumer representatives at least one-half shall be recognized spokesmen for organized labor in Connecticut."

I am of the opinion that consumer representation on the Board of Directors of CMS is a request worthy of consideration. Yet, any such representation should reflect the interests of the entire community rather than the interests of any segment of that community.

Numerous matters of an organizational character have required the attention of your Council.



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During the fall, Dr. Monahan of Bridgeport, submitted his resignation as Managing Editor of the State Medical Journal. The Council having accepted his resignation, nominated Dr. Denis S. O'Connor of New Haven, to this post and he has diligently addressed himself to the onerous task of Managing Editor of the Journal. The Council, in accord with our by-laws, recommends that the House of Delegates confirm this action of the Council.

Dr. Fred Fabro of Torrington, being unable to serve as a delegate to the AMA submitted his resignation to the Council. The Council accepted Dr. Fabro's resignation, nominates Dr. John Gallivan, who has served the Society faithfully in many capacities and is at present an AMA delegate.

The Council has received two requests concerning the representation on the Committee on Medical Education and Licensure by a pediatrician. One of these requests originated from the Chairman of the Committee, Dr. John Booth. The second came from the Academy of Pediatrics. In acknowledging these requests the Council indicated its willingness to consider a pediatrician on this committee when the opportunity presented itself but in the meantime the Council must abide by the actions of the House of Delegates.

The by-law recommendation for the Committee on Mental Health on the agenda today for consideration has been approved by the Council. Its purpose is to provide for longer tenure of service on the committee.

The by-laws of our Society state as one of our purposes the enlightenment and direction of public opinion so that the profession shall become increasingly useful to the public in the prevention and care of disease and the prolongation and addition of comfort to life. In these years when many suggestions pertaining to this purpose are incorporated in bills presented to our General Assembly, it is important for the members of the Society always to be readily available in an advisory capacity to our legislature. Such is the aim of our State Committee on Legislation. The Chairman of the Council recently met with the members of this committee so that they would be prepared to be of assistance to the General Assembly. It is of the utmost importance that each member of the Society seriously consider his obligation to his patients in this regard.

In closing my report let me urge upon you the necessity that you return to your constituents with a firm intent of arousing the physicians of your community to the demands being made of the profession—indeed, not only demands but threats. If

the lofty ideals of the full practice of medicine are to be sustained, many more physicians must be willing to make the sacrifice of time and effort that go beyond those aspects of the practice of medicine which have to do with the office, home and hospital care of patient. In short, I am saying the twenty-seven members of the Council and the members of this House of Delegates cannot do the job at hand. We need the help of each of the over 3,000 physicians of the State.

One personal note and I am finished—it is my privilege to be serving on a Council unselfishly devoted to the interest of Connecticut Medicine—the time taken from their practice and the attendant financial loss is a testament to their unselfishness and devotion.

Our Executive Secretary, Bill Richards—to him each of us owes much for his untiring, faithful services, and to Mrs. Lindquist, Mr. Burch and the entire staff of our State headquarters, I wish to express the thanks of the Society for their faithfulness.

THOMAS M. FEENEY, M.D.

Connecticut State Medical Society
Chairman of the Council

Special Notices

HARTFORD HOSPITAL

GUEST SPEAKERS—HARTFORD MEDICAL SOCIETY

1959

January 19

ROSS A. MCFARLAND, PH.D., Harvard School of Public Health.

8:30 P.M. "SPACE MEDICINE"

Hunt Memorial Medical Building

February 2

WARREN DRAPER, M.D., Executive Medical Officer, United Mine Workers Association.

8:30 P.M. "A FAIR DEAL FOR THE PATIENT"

Hunt Memorial Medical Building

February 16

THOMAS WARTHIN, M.D., Associate Clinical Professor of Medicine, Harvard Medical School. Member, Board of Examiners, American Board of Internal Medicine.

5:00 P.M. "PEPTIC ULCER AND CHRONIC NEPHRITIS"

Hartford Hospital Amphitheater

8:30 P.M. "ETIOLOGY AND MANAGEMENT OF REGIONAL ENTERITIS"

March 2

FRANCIS MOORE, M.D., Professor of Surgery, Harvard Medical School.

5:00 P.M. CLINICAL PRESENTATION

St. Francis Hospital Amphitheater

8:30 P.M. "PRACTICAL CONSIDERATIONS IN THE
TREATMENT OF SURGICAL
HYPOTENSION"

Hunt Memorial Medical Building

March 16

ROBERT STERLING PALMER, M.D., Chief of Hypertension Clinic,
Massachusetts General Hospital.

5:00 P.M. CLINICAL PRESENTATION

Hartford Hospital Amphitheater

8:30 P.M. "PROGNOSIS IN HYPERTENSION"

Hunt Memorial Medical Building

April 6

JOHN PAUL, M.D., Professor of Preventive Medicine, Yale
University School of Medicine.

IRVING WRIGHT, M.D., Professor of Clinical Medicine, Cornell
Medical School.

8:30 P.M. "SOVIET MEDICINE"

Hunt Memorial Medical Building

April 20

JOHN M. HOWARD, M.D., Professor of Surgery, Hahneman
Medical School, Philadelphia.

5:00 P.M. "PANCREATITIS"

St. Francis Hospital Amphitheater

8:30 P.M. "BASIC RESEARCH IN RELATION TO
ACCIDENTS"

Hunt Memorial Medical Building

The Annual Spring Meeting of the Alumni Association of
the New York Eye and Ear Infirmary will take place April
20-23, 1959, at the Infirmary.

Symposia will be offered on the ENT side on: Allergy and
Immunology in Otolaryngology; Diagnosis and Treatment of
Laryngeal Conditions; Hearing Rehabilitation; and Rhi-
noplasty. In addition, there will be a closed circuit television
demonstration of Head and Neck Surgery.

There will also be a Combined EENT Symposium on
Headache.

On the Eye side Symposia will be offered on: Complica-
tions of Ocular Surgery at the Operating Table and Their
Management; Management of Post-Operative Complications
(24 hours to 2 weeks); Practical Application of New Thera-
peutic Measures in Ophthalmology; and Ophthalmic Plastic
Surgery. There will also be offered a closed-circuit television
demonstration of surgical operations.

In addition, Courses will be given in the following subjects:
Recent Advances in Biomicroscopy; Contact Lens Fitting;
External Eye Diseases; Indirect Ophthalmoscopy; Pterygium
Surgery; Tonography; Vertical Eye Muscles; Recent Ad-
vances in Ophthalmic Research; Ocular Pathology; Macula
Function; Orthoptics; Electrophysiology of the Eye; and
Corneal Transplants.

Additional information may be obtained by writing to Dr.
John R. Finlay, Secretary, Alumni Association, 218 Second
Avenue, New York 3, N. Y.

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1959 CONNECTICUT GENERAL ASSEMBLY

The list of state and national political representatives is being published at this time in order that members of the Society may be in a position to know with whom they should talk regarding any matter of interest to the medical profession which arises in the coming session of the general assembly.

STATE SENATE

<i>Dist.</i>	<i>Name</i>	<i>Address</i>
1	Thomas J. Kerrigan, Jr.,	14 Stanwood Street, Hartford
2	Sam'l Lebon,	392 Trumbull Street, Hartford
3	Anthony J. Armentano,	136 Hubbard Road, Hartford
4	Fred J. Doocy,	Ellington Road, Wapping
5	Wallace Barnes,	161 Grove Street, Bristol
6	John M. Scanlon,	141 Lincoln Street, New Britain
7	Charles T. Alfano,	Marbern Drive, Suffield
8	Paul J. Falsey,	223 Lombard Street, New Haven
9	Edward L. Marcus,	38 Trumbull Street, New Haven
10	Arthur H. Healey,	45 Howard Ave., New Haven
11	Frank A. Piccolo,	103 Chatham Street, New Haven
12	Russell I. Boyce,	Mapleview Road, Wallingford
13	Anthony P. Miller,	218 Charles Street, South Meriden
14	Gloria Schaffer,	Tumblebrook Road, Woodbridge
15	William J. Verriker,	77 West Ridge Drive, Waterbury
16	James F. McGrath,	216 Tracy Avenue, Waterbury
17	James J. McCarthy, Jr.,	23 Cedric Avenue, Derby
18	Peter P. Mariani,	127 Tyler Ave., Eastern Pt. Groton
19	Alfio C. Urbinati,	75 Coit Street, Norwich
20	Mario A. Orefice,	Columbus Avenue, Niantic
21	John J. Relihan,	765 Myrtle Avenue, Bridgeport
22	Louis I. Gladstone,	71 Washington Ave., Bridgeport
23	Edward J. Caldwell,	226 East Pasadena Pl., Bridgeport
24	Norman A. Buzaid,	9½ Delay Street, Danbury
25	Norman Hewitt,	10 Brooklawn Terrace, Fairfield
26	Abner W. Sibal,	15 Cannon Street, Norwalk
27	Clement L. Raiteri, Jr.,	239 Main Street, Stamford
28	Maurice J. Ferland,	15 Westfield Avenue, Danielson
29	Joseph A. Coutu,	286 Summit Street, Willimantic
30	Robert P. Burns,	199 Benham Street, Torrington
31	Francis C. Cady,	Kent
32	George B. Angevine,	R.F.D., Cornwall
33	John F. Pickett, Jr.,	252 Main Street, Middletown
34	John A. Holbrook, Sr.,	Essex Road, Westbrook
35	David J. Dickson, Jr.,	209 W. Main St., Stafford Springs
36	Florence D. Finney,	59 River Rd., Cos Cob

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 North Haven—John F. Cipriano, 219 Maple Avenue; Ralph L. Earle, 101 Mansfield Road
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 Waterbury—John D. Adams, 5 Harriet Avenue; Daniel J. Mahaney, 1309 Bank Street
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 Franklin—Jason H. Kingsley, R.F.D. #1, Lebanon
 Griswold—William F. Farley, 19 Ann Street, Jewett City; Leon J. Gwiazdowski, 17 Ashland St., Jewett City
 Groton—Frederick A. Little, 69 Country Club Road; Reginald H. Wood, 31 High Street, Mystic
 Lebanon—Jack Frankel, Lebanon; E. Fenn Nourse, Lebanon
 Ledyard—Ray D. Holdridge, R.F.D. #2, Gales Ferry
 Lisbon—Eva M. Harris, R.F.D. #4, Norwich
 Lyme—John H. Beebe, R.F.D. #3, Old Lyme; Max F. Brevillier, R.F.D. #2, Old Lyme
 Montville—Robert H. Barnes, Pine Knoll, Uncasville
 New London—Mary Hill, 5 Maxson Place; Joseph Ottaviano, Jr., 139 Cedar Grove Avenue
 North Stonington—Roy S. Lee, North Stonington; Mildred M. White, North Stonington
 Norwich—James Albert Gaffney, 7 E. Pratte Ave., Taftville; Esther K. Taft, 360 Washington Street
 Old Lyme—J. Tyler Patterson, Jr., Neck Road, Old Lyme
 Preston—Carrie F. Mansfield, R.F.D. #7, Norwich; Charles K. Cray, R.F.D. #1, Norwich
 Salem—Joseph T. Ploszaj, R.F.D. #3, Colchester
 Sprague—Michael P. Conway, Baltic
 Stonington—James H. Allyn, Masons Island, Mystic; Joseph J. Purtill, 34 West Broad Street, Pawcatuck
 Voluntown—Birdsey G. Palmer, Voluntown
 Waterford—Leon J. Gascom, Great Neck Road; John J. O'Loughlin, Oswegatchie Road

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Darien—Marjorie D. Farmer, 14 Highland Avenue; Gennaro W. Frate, 47 Hecker Avenue
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New Fairfield—Edwin L. Faris, Candlewood Isle
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Norwalk—Louis J. Padula, 11 Rome Street, South Norwalk; John Shostak, Pequod Drive, South Norwalk
Redding—Robert W. Marsh, Redding Ridge; Margaret S. Reinhardt, R.F.D. #2, West Redding
Ridgefield—Nancy Carroll Draper, Bennetts Farm Road, R.F.D. #2; Robert R. Keeler, 35 Nod Road
Shelton—Myrtle S. Perri, Pine Rock Park, Box 24; Dean F. Taylor, 123 Ann Avenue
Sherman—Edwin F. Osborn, Sherman
Stamford—Lotus M. Mills, 217 Haviland Road; James N. Mulreed, 53 Crane Road
Stratford—Robert N. Hunziker, 125 Gem Street; George F. Wright, 7 Baird Court
Trumbull—Beulah L. Blackman, 5087 Main Street; Gerard S. Spiegel, 3141 Main Street, Bridgeport 6
Weston—John M. Lupton, Norfield Road
Westport—Henry Ferne, 2nd, 114 Greens Farms Road; Helen H. Mackie, 193 North Avenue
Wilton—Morris Earle, Nod Hill Road, P. O. Box 194

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Brooklyn—William F. Pakulis, Blueberry Lane
Canterbury—Hans Hansen, R.F.D.; Richard L. Trayner, R.F.D.
Chaplin—Arthur J. Lucas, Jr., North Windham, Box 125
Eastford—John H. Smith, Star Route Chaplin
Hampton—John E. Holt, R.F.D. Still Pond
Killingly—Joseph A. Billings, Box 169, Dayville; Henry J. Simoneau, 55 Mechanic Street, Danielson
Plainfield—Anthony Collelo, Moosup; Antonio E. Demuth, Wauregan
Pomfret—James J. Byrnes, P. O. Box 158; Dorman H. Weaver, Pomfret Center
Putnam—Alfred C. Dion, 106 Woodstock Avenue; Bertha A. Vadnais, 112 Battey Street
Scotland—Roland N. Gauthier, Windham Center
Sterling—John F. Sayles, R.F.D. #1, Moosup
Thompson—Wilfred A. LaFleur, North Grosvenordale; Narcisse I. Ravenelle, North Grosvenordale
Windham—John E. Blake, Box 143 Willimantic; Albert J. Harvey, 245 Summit Street, Willimantic
Woodstock—Axel E. Larsen, Woodstock; Harriet Pitt, Woodstock

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Bethlehem—J. Raymond Stevens, Box 1
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Canaan—Arthur D. Stein, Sr., Falls Village
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New Hartford—Daniel J. Burns, Box 477; Nicholas B. Eddy, Main Street
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East Hampton—John H. Paonessa, R. 3, Box 223; George K. White, 17 Summit Street
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Coventry—Charles N. Harlow, Jr., 27 Lakeview Drive; Stephen Loyzim, R.F.D. #3
Ellington—Jarvis N. Clapp, Main Street
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Mansfield—Foster H. Richards, R.F.D. #3, Willimantic; Edwin O. Smith, Mansfield Depot
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Stafford—Renato B. Calchera, R.F.D. 1, Stafford Springs; Benito Muzio, Staffordville, P. O. Box 157
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Address the U. S. Senators, at Senate Office Building, and the U. S. Representatives at House Office Building, Washington, D. C.

Obituaries



ERNEST SACHS, M.D.
1879-1958

Dr. Ernest Sachs passed away on December 2, 1958 and thus ended an extraordinary career. There passed a great man, a humanitarian, a dedicated husband, father, neurosurgeon, scientist and teacher.

"Fifty Years of Neurosurgery," Dr. Sachs' last publication, is documentary evidence of the greatness of the man who was with us for too short a time. Many of us missed the import and impact of his personality because of his plain and undemanding manner. Fortunately some of us were attuned to his greatness and in this connection we can mention in particular, Dr. John F. Fulton and Dr. Louise Eisenhardt. Throughout life, as is so often the case with great leaders, there were those among his clinical colleagues here and before that in St. Louis, who perhaps unwittingly, tried to keep him "walled off" as neurosurgeons sometime say. He bore this show of human frailty philosophically with no outward sign of pain or anguish for he had a good reserve of oslerian *aequanimitas*.

From the beginning, he showed the hallmark of greatness and survived the handicap of being born the son of a great man in a highly intellectual family. Dr. Sachs always referred to his father as his first hero. When he joined hands in marriage with Mrs. Sachs, there began a veritable story book adventure in at oneness. The mark of greatness is on their two sons. The multitude of stories about his unselfish devotion to his patients and his students did not get into his book and are a monument to a man who was all heart and brain.

He has about 200 publications to his credit, and one third of his residents are in full time professional positions. He had friends and acquaintances the world over. How does one show such a man the proper tribute?

He was under consideration for an honorary degree at the time of his death, and the Barnes Hospital (University) lowered its flag to half mast. Hundreds of grief stricken letters poured in from everywhere. In one of these letters a former student wrote, "Only within the structure from which he operated has the pulse been stilled. Ernest Sachs still lives in an even more vital form and his force shall influence for time to come. The heart that could and did reach down from high places to sustain and comfort the lowly will never cease to beat. As a boy in the profession, I was often chastised by him and then I would see him in the middle of the night stoop to do one of the little things that only big men can do."

Our closing words come from a sonnet written to Dr. Sachs by his loving wife on his 70th birthday.

THE HELPING HAND

A steady hand stretched out to help and guide
To solid rock the worn and struggling feet
Of all who sink in quicksands as the tide
Inexorably rises. Swift to meet
And lead them safe to land, he gives new hope
And cheers them on their way, then turns once
more
To rescue others as they vainly grope
And guides them also to the sheltered shore.

This is his life—to give unendingly
Himself, his strength, his substance and his skill
To serve with greatness and humility
The sorely troubled and the gravely ill
And lavish on them all his healing art—
For trouble is the password to his heart.

To Dr. Ernest Sachs
on his 70th birthday
from his wife.

BERNARD S. BRODY, M.D.



HAROLD STRICKLAND, M.D.
1897-1958

Dr. Harold Strickland died suddenly on October 6, 1958. He was born in Lawrence, Mass., on December 9, 1897, the son of William and Ann Laycock Strickland. He was graduated from Phillips Andover Academy, Yale University, and McGill Medical School. He interned in the Meriden Hospital and began practice in Meriden in 1931.

He volunteered his services in the U. S. Army and was appointed to active duty in 1942, serving in New Guinea with the Field Artillery, Quartermaster, and Infantry Divisions. He was awarded two battle stars.

Upon discharge from the Army in 1945, he resumed his medical practice in Meriden. He was appointed assistant director of medicine and a member of the Medical Board at the Meriden Hospital. Also, he was elected vice-president of the medical staff of the Meriden Veterans Memorial Hospital. He was a member of the Meriden, New Haven County, and State Medical Societies and of the American Medical Association.

Dr. Strickland was active in the civic affairs of his community. He was a member of the Lions Club. He was chairman of the Meriden Board of Health and also chairman of the Mental Health Drive.

"Strick" as he was affectionately known by his friends, looked forward to his six weeks each year at his summer home in New Hampshire. He loved trout fishing and was deeply interested in sports, especially boxing in which he participated while at Yale.

He is survived by his wife, the former Janet Ward of Hampton, New Hampshire, whom he married in Montreal on April 2nd, 1930.

His devotion to duty and sincerity won him a high place in the hearts of his patients and colleagues. In bidding him his last farewell, a quote from the writings of Leonardo DaVinci seems most fitting, "As a well spent day brings happy sleep, so, life well used brings a happy death".

THOMAS AFFINTO, M.D.



DANIEL F. MAHONEY, M.D.
1896-1958

Dr. Daniel F. Mahoney died at his home in Redlands, California on October 31, 1958.

He was born in Hartford, Connecticut and received his early education at St. Joseph's Cathedral School. He graduated from Georgetown Preparatory School and Georgetown University.

In World War I he was an Ensign in the U. S. Navy.

Dr. Mahoney received his M.D. degree from

Georgetown University Medical School in 1924 and after an internship of two years at St. Francis Hospital, Hartford, Connecticut, he pursued post-graduate training in gynecology and obstetrics at the Boston City Hospital.

In 1927 he entered into private practice in Hartford, Connecticut, and was soon thereafter looked upon by his colleagues as most competent in his chosen fields. In 1933 his successful practice was interrupted by ill health and he went to California hoping for full recovery and return to practice. Fate ruled otherwise and the rest of his life was spent in a state of invalidism.

Dr. Mahoney bore his ills courageously and continued his interest not only in his profession but also in music and literature to both of which he had devoted much study.

He is survived by his wife, the former Louise Cramm, a daughter, Marie Louise of Redlands, California, his mother Mrs Nora C. Mahoney and two sisters, Edna C. and Mabel G. Mahoney, of Hartford, Connecticut.

ARTHUR B. LANDRY, M.D.



H. DeFOREST LOCKWOOD
1877-1958

Our good friend and associate, H. DeForest Lockwood, practiced medicine in Meriden for more than half a century. Like all dedicated physicians,

he lived an arduous life in a career which he himself had chosen.

He was not only well qualified medically and surgically, but also possessed other attributes which endeared him to his patients and medical colleagues. Dr. Lockwood's deep sense of fidelity, kindness, sympathy and understanding fitted him for his role as physician. His many contributions to the medical life of Meriden earned him the affection and loyalty of his friends, patients and medical contemporaries.

One of Dr. Lockwood's great accomplishments was in the field of general surgery. He was a pioneer in surgical technique. For many years he carried the responsibility of the surgical service at the Meriden Hospital.

For thirty years he served the city as medical examiner. In addition, he was health officer for a considerable period of time. In this capacity he promoted the compulsory pasteurization of milk and the immunization against diphtheria; both significant steps in preventive medicine. He also established the health program in the Meriden school system.

Dr. Lockwood served for more than twenty years as chairman of the Medical Board and as a member of the Board of Directors of the Meriden Hospital.

He was a member of the American Medical Association, Connecticut State Medical Society, New Haven County and Meriden Medical Societies. As a member of the Meriden Medical Society, he served as its secretary and president. In 1957 Dr. Lockwood was honored by the Connecticut State Medical Society as a fifty year member and was the recipient of a gold medal.

He was a member and past president of the Meriden Rotary Club; a incorporator of the Meriden Savings Bank.

He was commissioned a lieutenant in the Medical Corps of the U. S. Army in 1912. In 1916 he was promoted to the rank of major and served with the National Guard at the Mexican Border. During World War I, he organized the Meriden Ambulance Corps which went to Fort Ethan Allen for training, before embarking for France. In World War II, he was chief of the Medical Emergency Service for the Meriden War Council which had charge of the civilian defense.

Dr. Lockwood was born in Bridgeport in 1877. He was graduated from Yale University Medical School in 1901. After an internship in the New Haven Hospital, he located in Meriden where he established an extensive practice. He died of acute cardiac dilatation on Sept. 25, 1958 at the age of 81.

His survivors include his wife, the former Lucy Wakeman of Bridgeport, a son, H. DeForest Lockwood, Jr. of Cheshire, Conn., and three grandchildren, H. DeForest Lockwood, III, Miss Jane Lockwood and Miss Susan Lockwood, all of Cheshire.

The following is an excerpt from the editorial which appeared in the Meriden Journal at the time of Dr. Lockwood's death.

"We think that this fine physician was outstanding as a human being. He placed service to others above self. He represented all the best qualities of citizenship. He stood by the high ideals of his profession. We mark his passing with sorrow. There are all too few of his kind in this world today."

RAYMOND V. QUINLAN, M.D.

IN MEMORIAM

HOWARD, MARION E.—New Haven; Johns Hopkins School of Medicine, 1931; widow of Dr. Ashley W. Oughterson, former professor of surgery at Yale School of Medicine, who was killed in a plane crash in Colombia, South America, November, 1956, while enroute to accept a position as medical consultant in that country; after coming back to New Haven to settle her husband's estate, Mrs. Oughterson decided to continue the mission and returned to Colombia; member of the house staff, Department of Medicine, New Haven Hospital, 1932-1934; in 1933 received appointment as assistant in medicine under the late Dr. Francis G. Blake; instructor in medicine, Yale School of Medicine, 1936 to 1941, assistant professor from 1941 to 1947, when she was appointed associate clinical professor; married to Dr. Oughterson in 1942, she later entered private practice of medicine in New Haven; in April, 1942, she administered penicillin for the first time in this country, under Dr. Blake's direction, and the patient made a dramatic recovery and is alive today; found dead of natural causes in her hotel room January 5, in Cali, Colombia, aged 59.

STANDISH, JAMES H.—West Hartford; New York University College of Medicine, 1895; one of Hartford's oldest physicians; retired in 1956 after completing 60 years of general medical practice; died December 22, at Hartford Hospital from injuries suffered November 30, in an automobile accident, aged 87.

Medical School Grant

An unrestricted research grant of \$5,000 has been made to Yale University School of Medicine by Wyeth Laboratories. The New Haven school is one of twenty universities and hospitals throughout the nation benefiting from the pharmaceutical concern's \$100,000 award program. The award was received in behalf of Yale by Dr. Fred C. Redlich, chairman and professor of the Department of Psychiatry.

Staph Control Problems Told

A British physician says removing drug resistant infections is difficult because the main carriers of resistant staphylococci in operating rooms are members of the hospital staff themselves.

Speaking recently at the International Colloquium on Resistant Infections in New York, Dr. Robert Blowers, director, Public Health Laboratory, Middlesbrough, England, explained.

"Every operation exposes a wound to the risk of air-borne infection, and the staff, who are the main carriers of pathogenic staphylococci in the operating room, do not always declare their lesions."

Methods of Control: To control the spread of organisms in the operating room, Dr. Blowers urged:

Removing reservoirs of pathogenic organisms, mainly unsterilized bedding and everyday clothing.

Limiting movement in the operating room, thus reducing liberation and scatter of organisms.

Designing special ventilating equipment to remove air-borne organisms.

Destroying air-borne organisms by ultra-violet irradiation.

Dr. R. A. Shooter, bacteriologist, St. Bartholomew's Hospital, London, said four different sources of resistant infections have been observed in hospital wards.

To eradicate these sources, he recommended "proper aseptic nursing techniques, isolation of patients and other carriers infected with antibiotic-resistant staphylococci, and the routine use of nasal creams and hexachlorophene soap for all patients."

Mop and Pail: Ruth B. Kundsinn, ScD., Peter Bent Brigham Hospital bacteriologist, said conventional mop and pail methods of floor care succeeds in painting the floor with a thin layer of organisms.

She urged a wet pickup technique in which floors are flooded with a disinfectant-detergent.

Lung

New lung disease for which no cause has been found was described in exhibit by Armed Forces Institute of Pathology, Washington, D. C. Many of 27 patients who suffered disease—pulmonary alveolar proteinosis—were found to have inhaled various chemicals during their work, but exact cause has not been pinpointed.

Viruses

At least four "orphan" viruses—called so because they were not known to produce illness—now appear to cause aseptic meningitis. Dr. Tom D. Y. Chin, Communicable Disease Center, Kansas City, Mo., said causative viruses are now labeled ECHO, types 4, 6, 9, and 16.



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News from Washington

Revision of Regulations

The CAB's report notes that prior to June of last year, a history of psychosis, epilepsy, diabetes or coronary disease was automatically disqualifying for medical certification. Because of "numerous requests for relief," CAB started a movement toward revision of regulations so as to make limited-duty certificates possible.

"After consideration of the views submitted by all interested persons," says the statement, "the Board in June, 1957, amended Part 29 of the Civil Air Regulations by providing for the issuance of limited medical certificates to applicants who failed to meet the prescribed medical standards but who, nevertheless, in the opinion of the Administrator, could perform the duties and exercise the privileges of an airman on a limited basis without compromising air safety.

"Thus a history of psychosis, epilepsy, diabetes or coronary disease is no longer automatically disqualifying; instead, the revised regulation permits the Administrator to evaluate each case and to apply whatever limitations he may deem necessary for the issuance of a medical certificate."

Continuing, the statement expressed CAB's disappointment that CAA did not choose to avail itself of the rule change and issue restricted certificates. In consequence, it was necessary to reopen 36 appeals cases, many of which called for rehearings.

Medical Advice Rejected

Although neither CAA nor CAB can supply exact figures, it seems to be a fact that not a single one of the appeals upon which the Board has acted went in favor of CAA and recommendations of its medical unit. In other words, private and commercial plane pilots are receiving certificates to fly despite expert medical opinion that their own lives or those of others may be forfeit. Note: Federal Aviation Agency, which succeeds CAA on Jan. 1, will assume the rule-making power now held by CAB but the latter will retain veto authority in fitness cases.

\$8.1 Million Allotted by NIH Last November

Research grants and fellowships worth \$8.1 million were awarded in November by National Institutes of Health. For support of research projects (506), \$7.1 million was granted and remainder went into 388 fellowships. Cancer and heart studies accounted for nearly \$4 million of the awards. Altogether, they were spread over 186 institutions in

39 states, District of Columbia, Puerto Rico, Belgium, Canada, France and Italy. Only 75 of the 506 research grants were for new projects, in the sum of \$1,041,102.

Three states accounted for almost \$3 million of the grant awards: Massachusetts, \$1,053,053; New York, \$982,318 and California, \$878,918.

Secy. Flemming Reports on Cancer Drug Testing

At a news conference, Secretary of HEW Arthur S. Flemming presented a progress report on the Federal effort in financing of cancer drug discovery and development. Pivotal mechanism in this program is the Cancer Chemotherapy National Service Center, which in this year alone has let 73 contracts for screening, testing and production and made 140 grants to support clinical trials. Following are some of the facts and figures brought out by Secretary Flemming:

About 40,000 substances are being tested annually in quest of safe drugs with anti-cancer properties.

Surviving as far as the clinical trial stage are about 0.1 per cent of these compounds. Trials are under way in 150 cooperating hospitals, public and private, with 70 materials being employed.

Cancer Chemotherapy Service Center has a budget of \$23 million this year. This is exclusive of about \$7 million awarded by National Cancer Institute for support of 385 chemotherapy research projects.

"It is too early now to predict results of the chemotherapy program," said Secretary Flemming. "The significant point today is that our country has planned and launched an unprecedented, cooperative, nationwide effort to find chemicals that will be useful in fighting cancer. We are now crossing the threshold into full-scale operation of all phases of this effort."

Preview of Brookhaven Medical Center

U.S. Atomic Energy Commission displayed its \$6.5 million Medical Research Center at Brookhaven National Laboratory for press inspection prior to formal dedication ceremonies December 16. The tank-type reactor at the Center, first to be designed for medical research, will go into operation early this year. Speakers at the dedication, which culminated a two-day meeting of medical school deans, were Dr. Shields Warren, Boston pathologist and first director of AEC's Division of Biology and Medicine, and AEC Chairman John A. McCone.

FTC Cracks Down on Two More Weight Reducers

Consent orders have been approved by Federal Trade Commission curbing advertising claims for two more weight-reducing drugs. Anderson Pharmacal Corp., NYC, has agreed to modify its exploitation of "Du-Dol," which FTC branded as unsafe for use by persons with heart disease or diabetes. General Products Corp., Los Angeles, agrees to stop misrepresenting benefits of a vitamin preparation, "VCS Formula," as well as its product "Pounds-Off."

Ohio Doctors Want Coverage

A mail poll taken in October produced 4,095 Ohio votes for social security coverage and 2,737 ballots marked "no." The affirmative response represented 45 per cent of the association's membership (8,960). This was reported to House of Delegates. Note: WRMS predicts that within 18 months AMA will ask inclusion, or at least stand still for the branding iron.

Flemming Lifts Curtain On '60 Health Budgeting

Secretary of HEW Arthur S. Fleming has given Washington a preview of health, education and welfare budgeting which White House will send to Capitol for approval. This is for fiscal year beginning July 1, 1959. For NIH medical research and internal operations, same support as this year (\$294 million) will be asked. Funds at 1958-59 level also will be sought for maternal and child welfare grants to states, general public health grants, occupational health programs, studies of chronic diseases and aging.

Administration will be satisfied with less than the \$186.2 million available this year for Hill-Burton hospital expansion and the \$30 million for research construction grants. More money will be asked for food and drug law enforcement and staph infection control.

Tax Ruling May Benefit Indemnity-Type Coverage

Recent decision of Internal Revenue Service reaffirms policy of granting deductibility, as a medical expense, of sums paid in premiums for health and accident coverage. This allowance is granted even though, under the insurance policy, the indemnity payments may exceed amounts actually spent by the insured for medical or hospital care. Further, benefit payments received under a policy of this kind are excludable from gross income (Rev.Rul.58-602).

Social Security Program Held Financially Sound

A 13-member advisory council has filed a unanimous report holding methods of financing the Federal social security program to be sound and without need of fundamental change. Organized medicine's opposition to inclusion of physicians and widening of benefits to covered persons has been based in part on counsel from certain sources that the social security structure is financially irresponsible.

Awards Presented At AAAS

Dr. John F. Fulton, Sterling Professor of Physiology at Yale, received Sarton Medal for contributions to history of science. Chas. Pfizer & Co. is financial supporter of this award, bestowed by History of Science Society. Dr. Harry Rubin, 32-year-old associate professor of virology at Univ. of California, won the AAAS-Anne Frankel Rosenthal Memorial Award for Cancer Research. A companion prize (\$1,000) given by same donor for achievement in cardiovascular research went to Dr. Robert F. Rushmer, professor of physiology at Univ. of Washington.

1958 Worst Measles Year Since 1941; Other Data

Random notes from current morbidity report by Public Health Service: With something like 750,000 cases reported, 1958 was worst measles year since 1941 (890,000) . . . there were fewer than 1,000 cases of diphtheria all year, first time since records have been kept that national total stayed within three figures. . . . hepatitis, with just a little more than 15,000 cases, ran slightly ahead of 1957 and it was first interruption of steady decline noted since 1954's peak case-load of 50,000.

U. S. Needs Advisors On Mediresearch—Boyer

Ballooning of Federal expenditures for medical research grants makes imperative, says the head of one of the country's largest drug houses, the establishment of a standing, high level body to steer the program. At a symposium that was one of the features of annual meeting of American Assn. for the Advancement of Science here, Francis Boyer said:

"The impact of Federal expenditures upon medical research . . . inevitably will become almost thermonuclear. There is to my mind an imperative need for an independent and, above all, a permanent group of consultants which will serve as a source of top level advice and support to the Surgeon General, to the Secretary of Health, Education and Welfare, and to Congress itself." Note: Boyer is board chairman of Smith Kline & French.

Book Reviews

HOW TO LIVE WITH DIABETES. By Henry Dolger, M.D. and Bernard Seeman. W. W. Norton & Co., Inc., New York, 1958. 192 pp. \$3.50.

Reviewed by BARNETT GREENHOUSE, M.D.

This is a most interesting and readable diabetes manual, written with clarity in a conversational style. It is the successful result of the combined efforts of Dr. Dolger, the physician, and Mr. Seeman, the science writer. The book is a good example of how well the art and science of the two blended.

The story of diabetes is unfolded as a narrative, and is as interesting as a novel. The book is replete with diabetic information and practical advice drawn from Dr. Dolger's wide experience and personal convictions, and offered in the interesting style of an accomplished writer.

Especially interesting is the clear recapitulation of the historical background of diabetes, the diabetic diet and the dramatic discovery of insulin and the oral anti-diabetic preparations.

The subject of diabetes is presented with optimism aimed at teaching and encouraging the diabetic individual in his proper care. Diabetic complications, which are beyond the patient's control, are not dwelt upon and are left to his physician.

The book is divided into four parts dealing with the disease in general, its management—tools and techniques—including insulin and the oral hypoglycemic compounds, and the problems and prospects of the disease.

The author's wide experience with Orinase comes in for a good measure of discussion. Mention is made also of chlorpropamide (which has been released as Diabinese), and DBI which is still in the investigative phase.

Separate chapters are devoted to the diabetic child, the adolescent, and the adult diabetic, and to diabetes as a special problem for women. The needs of each group differ significantly and are dealt with accordingly with tolerance and understanding.

The prospects of the disease are discussed philosophically, suggesting that our present outlook on diabetes may be likened to the widespread disease known as *The Fever* a century ago, "a strange malady which showed certain peculiar variation", but had one symptom in common—the rise in temperature that gave the disease its name. And today's diabetes resembles *The Fever* of a century ago in many respects, showing considerable variation but having in common glycosuria and an elevated blood sugar. Present-day treatment does not strike at the cause of the particular variety of diabetes involved but aims only at reducing the blood sugar levels. A century hence physicians may look back with kindly tolerance on our present day understanding of diabetes with its different disease mechanisms and wide range of ailments even as we look back on our forebears a century ago.

Diabetes, at present, is considered an incurable disease. Diabetic "cures" that have occurred are more in the nature of remissions, and permanent remissions do happen, though rarely. More frequent are the temporary remissions. Illness,

pregnancy or stress—emotional as well as physical—may provoke the symptoms of diabetes which may vanish only to return again at some future time. Remissions also take place in juvenile diabetes but the disease invariably returns.

Basic research is providing vital clues. Crash programs are being conducted in which many chemicals, natural and synthetic, are being screened for possible effects in the treatment of diabetes.

A great advance in the understanding of insulin has been made by Dr. Frederick Sanger of Cambridge University (1958 Nobel Laureate in Chemistry). Achieving a milestone in the study of proteins, Dr. Sanger has at last succeeded in unraveling the chemical structure of insulin and determining how the essential components of insulin are linked together. Already, certain changes in the structure of the insulin molecule have been found to inactivate insulin instantly.

(Dr. Charles H. Best, codiscoverer of insulin, has indicated that the insulin molecule may possibly be so altered as to overcome the intestinal barrier to it, and he foresaw the eventual development of a successful *oral* insulin.)

"As a result," the authors conclude, "whatever promises are still to be fulfilled by the expanding future, today's diabetic can live a longer, fuller and more nearly normal life than was ever before imagined possible."

The book has the earmarks of a "best seller".

THE CEREBROSPINAL FLUID. Editors—G. E. W. Wolstenholme and Cecilia M. O'Connor. 1958. Little, Brown and Co., Boston. \$9.00. 335 pp.

Reviewed by L. D. PARTRIDGE

This small (335 pp.) book is in fact a collection of fifteen related, but separate, review papers written by as many authors. The papers were presented at the three day Ciba Foundation Symposium on cerebrospinal fluid held in London in May 1957. Each paper is followed by the resulting discussions among the twenty-five invited participants at the meeting.

The Symposium, as indicated by the sub-title, was developed around the "Production, Circulation and Absorption" of the cerebrospinal fluid. The first five papers are anatomical and deal with the development, structure and innervation of the choroid plexus and the arachnoid granulations. Six other papers are concerned to quite a degree with factors involved in the transfer of electrolytes, water and large molecules between the blood and cerebrospinal fluid and between this compartment and the brain tissue. In discussion of local composition differences and evidence of circulation, it becomes obvious that the simple schema of fluid production and movement commonly outlined in textbooks is a crude approximation of the true situation.

The papers considering the importance of vitamins and abnormalities of C.S.F. production, movement or absorption in the causation of hydrocephalus provoked a rather active discussion, bringing out the controversy in this field.

While this book could not be considered essential to the library of all physicians the relative lack of specialized terminology and the critical discussions following each paper makes a presentation which is rather readable for any one who might be interested in this specialized subject.

Around the State

New Haven County

Mark A. Hayes, M.D. was elected president of the Connecticut Society of American Board Surgeons, Inc., at the 11th annual session held at the New Haven Lawn Club. Eugene J. Fitzpatrick, Jr., M.D. was elected the secretary-treasurer.

Louis M. Rousselot, M.D., director of surgery, New York University College of Medicine, was the guest speaker.

Maurice M. Hillman, M.D. has been elected president of the Connecticut State Allergy Society. Marvin Mogil, M.D. was named secretary-treasurer.

Fairfield County

John B. Ogilvie, M.D. of Stamford, was named president-elect of the Connecticut Society of American Board Surgeons, Inc. at the 11th annual session.

R. Edward Vioni, M.D. of Bridgeport has been elected vice-president of the Connecticut State Allergy Society.

Henry O. Hoberman, M.D. formerly of Bridgeport and now professor of biochemistry in Albert Einstein Medical College, New York, has been awarded a Commonwealth fellowship in research to Oxford University, England. He will go in July.

Ciro Veneruso, M.D. has been appointed as a resident physician at the Connecticut State Hospital in Middletown. He is a graduate of Fairfield University and the Georgetown Medical School.

Clifford W. Mills, M.D. was elected president of the Norwalk Medical Society. Edward J. Flynn, M.D. was named vice president; David D. Giardina, M.D. secretary, and Ignatius J. Vetter, M.D., treasurer.

Middlesex County

Edgar C. Yerbury, M.D., superintendent of the Connecticut State Hospital, has announced the appointment of Dr. Johannes P. Braat of Aruba, Netherlands West Indies, as a senior physician on the hospital staff. Dr. Braat has been serving as government psychiatrist and neurologist at Aruba and also was chairman of a commission there to combat alcoholism.

Hartford County

Harry Bellach, M.D. was elected a fellow of the American Academy of Dermatology and Syphilology at the 17th annual meeting in Chicago.

Ralph T. Ogden, M.D. was recently elected president of the medical and surgical staff of the Hartford Hospital. New vice president to succeed Dr. Robert G. Reynolds was Dr. Welles A. Standish. Dr. R. Starr Lampson was re-elected secretary.

Named chief of the medical staff at Mt. Sinai Hospital was Dr. Louis D. Harris. He succeeds Dr. Manuel S. Hirshberg. Dr. Harris is an ophthalmologist and a graduate of Tufts Medical School.

Other officers elected were, vice president, Dr. Oscar Zarkin, and treasurer, Dr. George Rosenbaum.

Dr. Burr Curtis, surgical chief at the Newington Hospital for Crippled Children will speak to the Hartford Hospital staff this month on "Acute Pyogenic Arthritis."

Dr. John Prignano of Manchester recently spoke to the local chapter of MATES on the subject of "Diets and Weights." This group is concerned with weight control.

The American Academy of Pediatrics has announced that Dr. William Hart of Hartford and Dr. Edward P. Wilmer of Wethersfield have been named Fellows of the organization.

Dr. D. Dillon Reidy has been elected president of the medical and surgical staff of St. Francis Hospital. Dr. Reidy succeeds Dr. Lewis James. Dr. Reidy is a urologist and a graduate of Columbia's College of Physicians and Surgeons. Dr. Maurice F. O'Connell has been named president-elect, Dr. Edward P. White, secretary, Dr. John O'L Nolan, assistant secretary, and Dr. Timothy L. Curran, treasurer.

The Connecticut State Medical Society has appointed Dr. Harold M. Clarke of New Britain to represent the society at a national conference on the medical care of veterans and their dependents held this month in Minneapolis. Dr. Clarke is also our councilor.

The Doctor's Office

George D. Donan, M.D. announces the opening of an office at 300 Main Street, New Britain, for the practice of physical medicine and rehabilitation.

Edward J. Neth, M.D. announces the opening of an office for the practice of internal medicine at 798 North Avenue, Bridgeport.

Sage D. Sikand, M.D. announces the opening of an office for the practice of orthopedics and surgery at 1219 Main Street, Willimantic.

WOMAN'S AUXILIARY

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Make Reservations Early

The 36th annual convention of the Woman's Auxiliary to the American Medical Association will be held in Atlantic City, N. J. June 8-12, 1959 at the same time as the AMA convention. Our headquarters will be at Haddon Hall. Look for the reservation slip in your husband's *Journal* and plan NOW to attend.

Annual Meeting

"The Physician as Portrayed in Modern Literature" will be the subject of a talk by Herbert J. Kramer, Ph.D. at the annual Auxiliary meeting, April 29 in New Haven. Dr. Kramer is the assistant manager of the Public Information and Advertising Department of the Travelers' Insurance Co. He is a graduate of Harvard, with a B.A., M.A., and Ph.D. in English Literature. Recently he received his LL.B. from the U. of Connecticut and is now a member of the Connecticut Bar Association. Dr. Kramer, in addition to his many other civic activities, is a member of the West Hartford Board of Education.

The annual meeting will be held at the Sanford Barn so remember to save the date, Wednesday, April 29. Plan to attend the business meeting and luncheon, and to hear Dr. Kramer's speech.

National Bulletin

HAVE YOU READ IT? Central office reports over 275 subscriptions from our Connecticut Auxiliary, which is almost 25 per cent of our membership but surely we CAN and WILL increase our subscriptions. Middlesex County has set a fine precedent by voting to add \$1 for the BULLETIN to their dues for the coming year (meanwhile they are busy adding subscribers for this year). Let's hope some of the other counties will follow this example!

"Every Member a Subscriber" to the BULLETIN is the national goal for this year, and when we realize all that is offered I'm sure the goal will be realized. Remember that this is our official voice and AN INFORMED MEMBER SERVES HER COMMUNITY BEST!

ANNA E. WIGHT, *State Bulletin Chairman*

Industrial Health Meeting to be February 16-18

More than 350 representatives of labor, industry, medicine, and governmental agencies will convene in Cincinnati Feb. 16-18 for the 19th annual Congress on Industrial Health.

The congress will be held at the Netherland Hilton Hotel. Three major areas of occupational health—education, research, and the practice of occupational medicine—will be discussed.

Sponsored by the American Medical Association's Council on Industrial Health, the congress is held each year as a way of furthering the development and maintenance of high medical standards in industry.

Established in 1938, the council supports safe and healthful working conditions for employees through medical supervision of workers, control of environment, health education, and counseling, according to Dr. B. Dixon Holland, Chicago, council secretary.

The opening session Monday afternoon, February 16, will be devoted to education and training in occupational health. Among the panelists will be Drs. Robert A. Kehoe, Cincinnati; A. G. Kammer, Pittsburgh; Seward A. Miller, Ann Arbor, Mich., and James H. Sterner, Rochester, N. Y.

Dr. John D. Porterfield, Washington, deputy surgeon general, U. S. Public Health Service, will speak at the annual banquet Monday evening. At that time the annual award of the President's Committee on the Employment of the Physically Handicapped will be presented to a physician who has

made an outstanding contribution in the field of employing the handicapped.

The Tuesday morning discussion on research in occupational health will be conducted by Dr. Sterner. Participants will include Kenneth C. Steward, M.S., Pittsburgh; Conrad P. Straub, Ph.D., Cincinnati; and A. Wesley Horton, Ph.D., also of Cincinnati.

Poisoning resulting from industrial chemicals will be discussed Tuesday afternoon by Herbert E. Stokinger, Ph.D., Dr. A. A. Brust, and Dr. Mitchell Zavon, all of Cincinnati.

A joint meeting with the Cincinnati Academy of Medicine will be held Tuesday evening. Dr. C. W. Shilling, Washington, acting director, division of biology and medicine, U. S. Atomic Energy Commission, will discuss the problem of fallout and radiation.

The three-day congress will conclude Wednesday morning with a clinical session on the practice of occupational medicine. Dr. Frank Princi, Cincinnati, will be the discussion leader.

Body's Own Bacterial Flora Called Best Defense Against Staphylococcal Infection

In discussing current problems in antimicrobial therapy, Dr. Burton A. Waisbren, Assistant Clinical Professor of Medicine, Marquette University School of Medicine, told the National Medical Association that the body's best defense against staphylococcal infection is its own natural bacterial flora. These bacteria can best be protected by using narrow rather than broad spectrum antibiotics, which too often destroy them. He suggested that preoperative prophylactic antibiotic therapy be completely aban-

doned, except in a few situations such as bowel surgery. Dr. Waisbren pointed out that before the staphylococcus problem can be solved operating room techniques will have to be re-examined and evaluated, positive pressure ventilation will have to be installed in operating rooms, all persons will have to wear double masks, the circulating nurse will be dispensed with, and all unnecessary conversation will have to be eliminated. He hopes some day to see the return of the autocrat of the operating room, the surgeon who is in complete control and who feels personally responsible for every phase of the operation including protection of the patient against staphylococcal infection. Postoperative care will have to be revised also: seriously ill postsurgical cases isolated from other patients, physicians change into gowns before entering a ward, rotating dressing carts eliminated and number of visitors curtailed.

Because it is impossible to cure a staphylococcus carrier, he/she should not be allowed in a hospital nursery, Dr. Waisbren emphasized. "This may be a difficult decision if the carrier happens to be the head nurse with 30 years service. But would there be as much hesitation if she were a diphtheria carrier? A staphylococcus carrier in a nursery is much more dangerous."

Wanted

The State Prison is in need of a Chief Medical Officer whose duties are to administer the prison hospital and head up all medical services. The salary range is from \$8,340 to \$11,880. The Chief Medical Officer would have a staff of consultant specialists to assist him in his work. Anyone who might be interested in such a position should contact, M. S. Richmond, Warden, Connecticut State Prison, Wethersfield, Connecticut.

New: Reading By Sound

Veterans Administration reports it has developed a device that will permit blind persons to "read" from ordinary books and magazines. The instrument, about the size and shape of a portable radio, focuses a light beam on the printing, which produces a pattern of musical chords. The blind person is trained to interpret these sounds as letters and words. VA says a reading speed of between 15 and 30 words per minute is possible. Only five models have been built, and quantity production will be delayed until the device has been further developed. The major advantage of this machine over Braille is that, being able to "read" normal print, the blind person can read business correspondence, carry on certain types of office work, and be less restricted in schooling.

—A.M.A. Washington Letter

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Advances In Upper Gastrointestinal Surgery

RICHARD T. SHACKELFORD, M.D.

Baltimore, Maryland

ADVANCES in upper gastrointestinal surgery mean improved methods which have made it possible to surgically treat diseases in this area with greater success than before, or to surgically attack lesions which previously were considered to be inaccessible. In recent years advances have been made for the benefit of all types of surgery, including that of the upper gastrointestinal tract.

Anesthesia has been greatly improved. The self-taught, conversational, attention-diverting ether-pourer of the past has been replaced by the trained anesthetist who, with discrimination, selects from an improved list of anesthetics the one most suitable for that particular patient, administers it scientifically, observes and records the fluid intake and requirements, and charts the vital signs, so that the earliest evidence of deterioration in the patient's condition can be detected and corrected before the deterioration has reached a point of no return. In addition he can intubate the patient, if desired, so as to provide a safe airway and adequate oxygenation by controlled respiration when the thoracic cavity or cavities are entered either intentionally or unintentionally, or when respiratory muscles are paralyzed by relaxants to provide better exposure for the surgeon. The use of a skilled anesthetist employing endotracheal anesthesia in operations on the upper gastrointestinal tract is, in my opinion, a definite advance in that type of surgery.

Another advance is the greatly increased knowledge of the fluid and electrolyte requirements of a patient before, during and after operation and recognition of the importance of restoring and maintaining this balance as near normal as possible at all times. Many different routines and formulae for accomplishing this have been described. All

have the same principle, namely to clinically estimate the state of hydration and to chemically measure the nitrogen, sodium, chloride and occasionally the potassium levels in the blood. Any deficits are corrected preoperatively, when possible, by the administration of appropriate amounts of fluid and electrolytes. After these have been administered the values are rechecked to make certain that the desired levels have been reached before operation. It is my practice, with the routine postoperative upper gastrointestinal case, to administer intravenously 2500 cc. of fluid each twenty-four hours, of which 500 cc. are five per cent glucose in saline and 2,000 cc. are five per cent glucose in water, until the patient's oral intake is adequate. In those cases in which fluid and electrolytes are lost through a nasogastric tube or by vomiting or discharge from a fistula, an amount of fluid and electrolyte, matching cc. for cc. the amount so lost, is added to the 2,500 cc. mentioned above. Electrolyte determinations are made on the first postoperative day and thereafter only when indicated. I give potassium intravenously only in special cases in which a chemical determination has shown its deficit and then give it in very carefully calculated amounts. It is a dangerous substance to administer intravenously without discrimination. When possible it is much safer to administer potassium per oram.

The accurately measured correction before operation of any existing anemia and the simultaneous unit for unit replacement of blood lost during operation is a great improvement over the former haphazard methods. Patients whose anemia is corrected before operation are better risks than those whose anemia must be corrected during the operative procedure. Accordingly, a preoperative hemo-

globin determination is a routine for us. When anemia is present an attempt is made to raise the amount of hemoglobin to 12 grams before operation. In a patient who is not actively bleeding each transfusion of 500 cc. of blood will raise the hemoglobin by about two grams.

Patients withstand an operation better if their blood loss is accurately replaced simultaneously as it is lost than if the loss outpaces its replacement and must be corrected too rapidly. A patient can be harmed by receiving more blood than required or by receiving blood too rapidly. This is particularly true in older patients and those with cardiac and respiratory disabilities. Hence the blood loss should be estimated with some degree of accuracy. There are expensive machines devised to do this. Not having such a machine I estimate it by measuring the amount of blood accumulated in the vacuum bottle which drains the suction tip used for removing blood from the wound and add the amount estimated to be on the blood soaked sponges. The method is not perfect but is inexpensive.

Another advance is the use of indwelling nasogastric tubes which have almost eliminated postoperative gastric dilatation, paralytic ileus and blown out duodenal stumps. Younger surgeons may not realize that in my houseofficer days the most common complications of biliary surgery were postoperative gastric dilatation and/or paralytic ileus. After a gallbladder operation no one felt comfortable until active peristalsis had returned and the patient's bowels had moved. Patients may now complain of the discomfort of a naso-gastric tube but the discomfort is minimal if compared to the brutal routine of those days when on the third postoperative morning the patient was given one or two ounces of castor oil to swallow. If gastric dilatation developed a large stomach tube was passed through the mouth and the stomach thoroughly lavaged. If there was a paralytic ileus it was treated by strong cathartics and enemas containing turpentine or, if it persisted, by spinal anesthesia. Many of these cases died.

Also in those days a common complication of a gastric resection was a blow out of the duodenal stump or of the anastomotic suture line. The use of naso-gastric stomach tubes postoperatively has made these complications uncommon.

It is my custom to place a nasogastric tube into the stomach of every patient undergoing upper gastro-intestinal surgery and to leave this tube in place until the patient is spontaneously passing gas or feces by rectum. Suction is attached to this tube only for the first twelve hours to remove any old blood or other detritus which accumulated during the operation. At the end of twelve hours suction

is discontinued and the tube is left to drain into an open bottle without suction. At this time the patient is allowed to drink water freely. Any that accumulates within the stomach will drain out through the nasogastric tube into the bottle where it can be measured, but much of this water is absorbed and adds to the patient's fluid intake. A difference between the amount taken and the amount drained through the tube is the amount absorbed. However, nothing but water is permitted by mouth until the spontaneous passing of gas by rectum is occurring. The limitation of oral intake to water only is because in former days I observed that gastric operations practically never had postoperative distention while operations on the gallbladder were nearly always followed by distention. There was a great difference then in the postoperative care of these two conditions. After operations on the stomach the patients were allowed nothing by mouth for the first twenty-four hours following which they were permitted only a few sips of water at hourly intervals for a number of days. They had no distention. On the other hand the day after an operation on the gallbladder patients were given orange juice or tea with sugar in it, or both; most became distended. Apparently the taking of substances containing carbohydrates made the difference. Consequently, now I limit the postoperative oral intake of abdominal cases to water only until peristalsis has demonstrated its effectiveness after which the tube is removed, a liquid diet commenced and the diet is increased as rapidly as tolerated. With this regimen postoperative gastric dilatation, paralytic ileus and blown out duodenal stumps are now uncommon. I am convinced that the use of indwelling gastric tubes is an advance in surgery so long as it is not abused and the tube is removed as soon as effective peristalsis has returned. Incidentally plastic nasogastric tubes are more easily passed and better tolerated than the rubber variety.

We now use open anastomoses when performing upper gastrointestinal surgery because they permit ligation of the bleeding vessels on the cut edges of the bowel and also the more accurate placing of sutures. As a result the incidence of postoperative bleeding from the suture line and of narrowing of the stoma has been reduced.

In operations on the upper gastrointestinal tract preoperative bowel preparation is not employed.

The use of antibiotics postoperatively is considered to be another advance but one which can be questioned. I use it routinely for about five days or until the temperature is normal after any operation in which the alimentary tract has been opened. I am not convinced of its value because with its use an abscess often develops more slowly than when an



FIGURE 1

A benign leiomyoma of the Esophagus shown by a roentgenogram after a barium swallow (Courtesy of Dr. Hayes at the Johns Hopkins Hospital).

antibiotic is not used hence it often cannot be recognized and treated until late in the convalescent period. This prolongs the hospitalization of these cases. On the other hand dangerous fulminating infections seem to have been minimized by the use of antibiotics.

Another advance has been the use of earlier ambulation. Now most operative cases are ambulatory on the first or second postoperative day instead of the second week as was the previous custom. I do not believe in physically forcing postoperative patients out of bed but do urge them to be up as early as possible. I am not convinced that this procedure has reduced the incidence of phlebitis or embolism but there is good evidence that it has reduced the incidence of respiratory complications and that patients recover their strength more rapidly.

The above developments have increased the safety of surgery of the upper gastrointestinal tract. Since 1930 (my house officer days) the mortality of operations for benign lesions of the stomach and duodenum has been reduced from 10 per cent to one per cent; that for malignant lesions of the stomach and duodenum has been reduced from 25



FIGURE 2

Carcinoma of the Esophagus at level of the Aortic Arch shown by a roentgenogram after a barium swallow.

per cent to five per cent and the mortality of gall-bladder operations has dropped from 10 per cent to less than one per cent. These figures are impressive.

Now that the thorax can be entered with impunity, lesions of the esophagus, which were previously immune to surgery, are being operated upon successfully.

Benign tumors of the esophagus (Fig. 1) can and should be removed. Most are leiomyomas which can be shelled out of the wall of the esophagus, usually without entering the lumen.

Carcinoma of the esophagus is being attacked with a success which varies with the location of the tumor. Those of the upper and middle thirds, that is at the arch of the aorta or above, (Fig. 2) have so far been treated with only slight success by surgery. The operation is a complicated one which requires not only removing a tumor which is in close proximity to vital organs but also replacing the esophagus with the stomach or part of the small intestine or colon pulled up into the chest. Replacement with a Berman plastic tube has not been as successful as we had originally hoped. These complicated operations are followed by some mortality and by a considerable morbidity with a very small percent-

age of five year survivals. In my personal experience with 16 such cases two died postoperatively, and, of the remaining 14, eight had complications which prolonged their hospitalization. None survived for five years and the average length of survival was only nine months. Discouraged by these results, I now refer all such cases to Dr. Robert Dickson at the Johns Hopkins Hospital for treatment with rotational x-ray therapy. He kindly gave me a recent analysis of forty such patients treated by him.¹ None has survived for five years. Two are still alive and well one year after treatment. One is living and well more than six months and four less than six months after such therapy. Thirty-three have died, twenty of them in less than six months, eight between six and twelve months, three in the second year and two between two and three years. The average survival time of those that died was only 7.9 months, but nearly all retained the ability to swallow up to the end and were killed by metastases rather than by the primary growth, a far more comfortable mode of death. Although the ultimate result has been no better than by our surgery, rotational radiotherapy has spared the patient the discomfort and hospital



FIGURE 3

Carcinoma of the lower third of the Esophagus shown by a roentgenogram after a barium swallow.

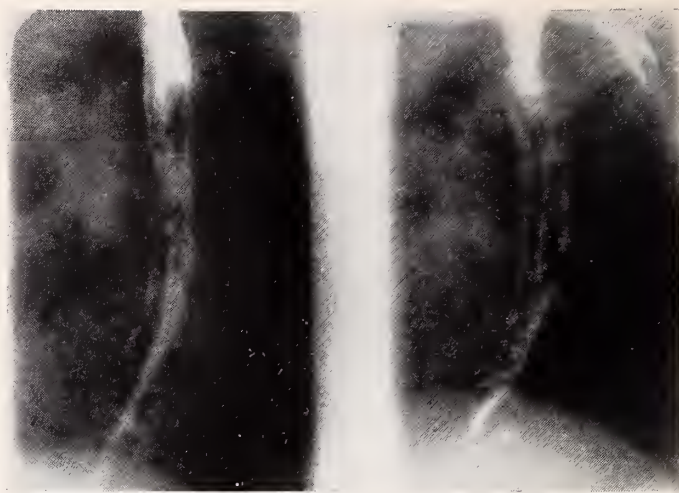


FIGURE 4

Esophageal Varices demonstrated by A-P and lateral roentgenograms after a barium swallow.

expense of an operation and has provided better palliation for more patients than has surgery. However, I do not mean to imply that surgery should be abandoned in these cases because some surgeons with vast experience with this condition, such as Sweet in Boston, have had increasing success with their operations on these lesions. In their hands the chance of success by surgery is greater than in mine or in the hands of other general surgeons who have no concentrated experience with this tumor. Surgery has produced the only five year survivals. Surgical attack by specialists should be continued because they may eventually evolve a method that can be used successfully by all of us.

On the other hand, carcinomas of the lower third of the esophagus (Fig. 3) should be attacked surgically because the operation is less complicated than for the higher lesions, has a lower mortality and morbidity, and a higher percentage of success. It is usually palliative and may be curative. In my small series of only six cases three died of metastases but with palliation so far as swallowing was concerned. Two have survived for two years and one for three years without evidence of recurrence to date. None, as yet, has survived for five years. Sweet² reports 34 per cent have survived for five years. This is a definite advance.

Bleeding esophageal varices (Fig. 4) are now being treated with moderate success by tamponade with the Sengstaken tube to temporarily control the bleeding. Surgical ligation of the varices through an esophagotomy is used for those in which the bleeding is not controlled or immediately recurs, and is followed later by a splenorenal or portocaval shunt (Fig. 5 and 6). Before performing such a shunt the patient's liver function should be carefully evaluated because the mortality is directly related to it. When indicated a shunt procedure is

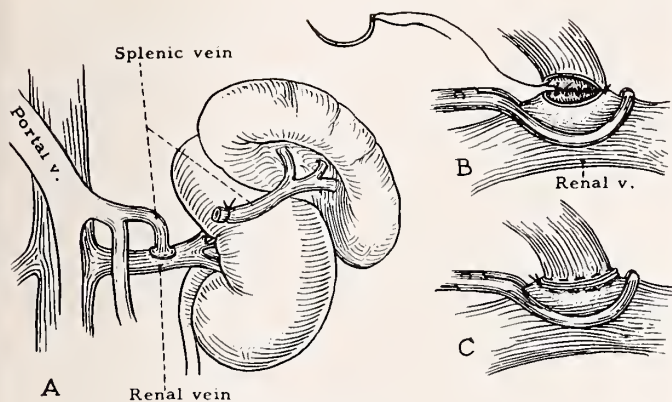


FIGURE 5

Anastomosis of the splenic to the renal vein to form a spleno-renal shunt. The spleen is removed. (Shackelford, *Surgery of the Alimentary Tract*, W. B. Saunders Co., Phila. 1955)

associated with about a 20 per cent operative mortality and 30 per cent long term benefit. Shunts are no longer performed for cirrhotic ascites alone, nor is there any reliable definitive operation for that complaint.

Diverticula of the esophagus (Fig. 7) formerly were treated by a two stage operation. More recently these are being removed with equal success by a one stage procedure.

Although Hiatus Hernias (Fig. 8) have been repaired surgically for many years a great advance has been the increasing recognition by the medical profession that these hernias are not all innocuous because some cause reflux esophagitis with ulceration, bleeding and cicatricial contraction. Once this complication has occurred its correction poses a problem that has not yet been satisfactorily solved. Resection of the area with esophagogastric anas-



FIGURE 7

Pulsion esophageal diverticulum demonstrated by a lateral roentgenogram after a barium swallow (Courtesy of Dr. Hayes at the Johns Hopkins Hospital)

tomosis either direct or by means of an interposition has been followed by too many sequelae to be considered the final solution but it is probably the best treatment that we have at present. Although it occurs rarely a few of these hernias may strangu-

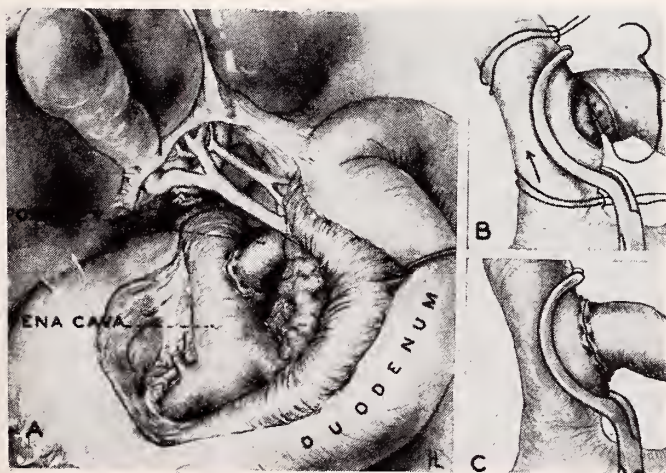


FIGURE 6

Anastomosis of the divided portal vein to the Vena Cava (Shackelford, *Surgery of the Alimentary Tract*, W. B. Saunders Company, Phila. 1955)

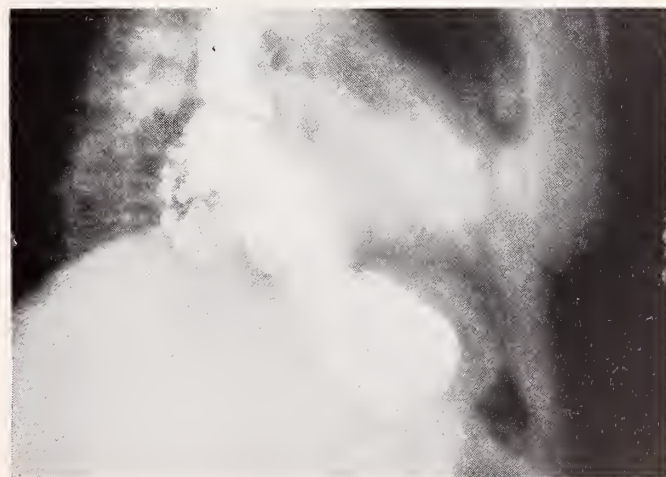


FIGURE 8

Hiatus Sliding hernia demonstrated by an oblique roentgenogram after a barium swallow.

late and perforate. With our present knowledge it would seem that these hernias should be repaired before the above serious complications develop. This does not mean that all hiatus hernias should be operated upon. Only those which produce symptoms need be repaired. Whether the repair is made through the thorax or through an abdominal approach makes little difference. In my experience the former is easier for the surgeon and the latter easier on the patient. Suspected concomitant lesions within the abdomen may be additional factors in favor of the abdominal approach.

Paraesophageal hernias and traumatic diaphragmatic hernias should all be repaired because of the definite danger of later strangulation. This is most easily done through a thoracic approach.

One of the greatest problems at present is what to do with the upper gastrointestinal bleeder when there is no preoperative clue to the source of hemorrhage and at operation no specific bleeding point can be found. No fixed rule for all cases can be stated. In general it is my practice, when the patient's condition permits, to perform an emergency preoperative x-ray study after a barium swallow. During this procedure we look for esophageal varices as well as a peptic ulceration. When no lesion can be found preoperatively and operation becomes necessary, as soon as the abdomen is opened the gastrointestinal tract is inspected and palpated for evidence of an offending lesion and for the highest level at which free blood in the intestinal tract can be seen. The liver is also examined to rule out the presence of cirrhosis and the omental veins are viewed to see if they are distended by increased pressure to suggest the presence of esophageal varices. If nothing definite is found I

make a long gastrotomy incision and inspect the interior of the stomach for the presence of blood and the site of its origin. This includes a look at the cardiac and pyloric orifices. If there is a suspicion of bleeding in the duodenum I do not hesitate to continue the incision through the pylorus in order to inspect the interior of the duodenum. If no bleeding point is found there arises the problem of whether one should resect the stomach blindly. If no blood is found within the stomach at the time of operation I do not resect it. There are many surgeons who will disagree with this point of view. However, if blood is found within the stomach and is not coming down through the cardiac orifice I do perform a high gastrectomy. If blood is coming through the cardiac orifice I extend the incision upward into the left chest so as to better inspect the esophagus. The proper handling of these cases is a debatable one. Upper gastrointestinal bleeding occurs from other causes than peptic ulceration in about 25 per cent of the cases.

Gastric ulcers may be malignant or benign and some of the benign ones will heal under proper medical management. However the best chance of curing those which are malignant is an early operation before the tumor has spread from its primary origin. Therefore the problem is to decide which should be operated upon and which should not and when (Fig. 9). Statistical evidence has been presented to indicate in which areas of the stomach an ulceration is most likely to be malignant but the location of the lesion is not a reliable sign because malignancy has been found in all areas of the stomach. The appearance of the x-ray silhouette is also not reliable. In my opinion a gastric ulcer may be treated medically for three weeks after which time another x-ray examination should be made and if the ulcer has not disappeared or markedly improved operation should be promptly performed. If the ulcer has markedly improved medical treatment can be continued for another three weeks after which time operation should be performed if it has not disappeared entirely. Medical colleagues may disagree with this point of view but I believe it to be an advance over the older method of treating these ulcers medically until they show a recognizable increase in size before operating.

Perforated gastric ulcers are not all benign and therefore before performing a simple closure surgeons now excise a piece of tissue from the ulcer for microscopic examination. If it is malignant a gastrectomy should be performed then or at a second operation.

Some progress has been made in the treatment of duodenal ulcer (Fig. 10). The introduction of

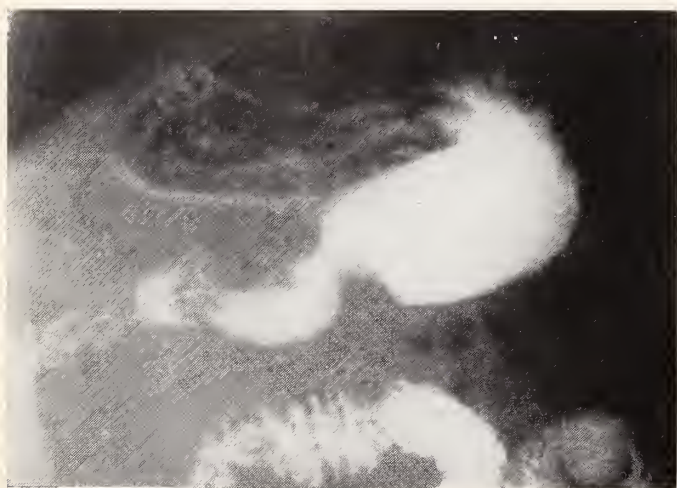


FIGURE 9

A benign gastric ulcer on the lesser curvature about 6 cm. proximal to the pylorus demonstrated by a roentgenogram after a barium swallow.



FIGURE 10

A benign duodenal ulcer crater containing barium and situated immediately beyond the pylorus. It is demonstrated by a roentgenogram after a barium swallow.

vagotomy by Dragstedt has been a definite contribution although not as great a one as originally hoped, because, in my experience, patients treated by vagotomy and gastroenterostomy have required a longer time after operation before normal gastric function has returned than after a partial gastrectomy. Other surgeons have reported recurrent bleeding from the ulcer after a vagotomy. Despite the fact that it does not seem rational to remove a large segment of the stomach and first portion of the duodenum simply to get rid of a small benign ulcer a partial gastrectomy, in my opinion, is the operation of choice for most duodenal ulcers. However, vagotomy with the addition of a gastroenterostomy is a valuable alternative when a gastrectomy seems risky.

An advance in the treatment of bleeding peptic ulcers has been the recognition that older people with this condition are more likely to bleed to death than are those who are younger. The dividing line between old and young is arbitrarily based at about the age of forty. In younger people the blood vessels are more likely to be soft and, when eroded, they can contract to stop the bleeding. On the

other hand, in older people the arteries are more likely to be rigid with arteriosclerosis and unable to contract. Nearly all surgeons who have operated upon bleeding peptic ulcers have seen some older patients in which a rigid bleeding artery was projecting in the center of the ulcer. Accordingly we tend to operate earlier on older patients with bleeding ulcers than on those who are younger. No fixed rule is made, but in general an older patient who continues to bleed or has recurrence of bleeding after 1,000 cc. of blood has been administered is taken to the operating room. In younger patients the period of treatment by transfusion alone may be prolonged to eight or ten units of blood. I am convinced that this is an advance over the older method of postponing surgery until patients had stopped bleeding regardless of how many transfusions were necessary to keep him alive. Some patients were lost who might have been saved by operation and, there is good evidence that their number exceeds the mortality of the operation itself.

In recent years resection of an acutely perforated peptic ulcer has been introduced for the treatment of that condition. If only those patients who are in good condition are carefully selected it is an advance. However, in my opinion, if used routinely it will increase the mortality and be a regression. My philosophy of surgery is that the simplest and safest operation which will deal successfully with the present emergency should be performed. Simple closure of a perforated peptic ulcer is both simple and safe. Follow-up studies over a period of 20 years³ have shown that after this procedure about one third of the patients will have no further symptoms, one third will require further medical treatment for persistence or recurrence of their ulcer symptoms and one third will require a later operation. I perform a simple closure of most acutely perforated peptic ulcers and reserve resection for a carefully selected few in which the perforation is recent, there is relatively little inflammation, and the stomach and duodenum are mobile so that a resection can be easily performed. This view is not shared by all surgeons.

A real advance in the treatment of perforated peptic ulcers has been their prompt recognition by the detection of free air beneath the diaphragm (Fig. 11) when a roentgenogram of the abdomen is taken with the patient in the erect and in the recumbent left lateral positions. It must be remembered, however, that the absence of this finding does not exclude a perforated ulcer.

It is now widely accepted that the primary treatment of duodenal ulcers is medical and that surgery should be reserved for the complications of bleeding, perforation, obstruction, and intractability.



FIGURE 11

Demonstration of free air under both diaphragms by a roentgenogram of the abdomen taken in the upright position in a patient with an acute perforated duodenal ulcer.

The recent report by Ellison⁴ and his colleagues of a series of patients who had repeated peptic ulcer formation and were found to have associated tumors in the pancreas is exciting the surgical profession at present. Others have reported similar isolated cases. There is speculation as to whether these tumors are the cause of an ulcer diathesis and as to the nature of any causal relationship. In view of these reports it would seem desirable, whenever operating upon a person with an ulcer diathesis, to explore the pancreas for the possible presence of these tumors and to remove any that are found.

I cannot speak to a medical meeting in Hartford without paying tribute to Hezekiah Beardsley who was a General Practitioner in this neighborhood and who first described congenital pyloric stenosis in a paper read before the New Haven County Medical Society in 1788. He diagnosed the condition before death and later performed the autopsy himself in the child's home to confirm the diagnosis. This antedated by almost one hundred years Hirschsprung's widely accepted description in 1877. The Fredet-Ramstedt operation was devised for treating this condition in 1913 and has remained the operation of choice.

Benign tumors of the stomach and duodenum are uncommon but not rare. Eusterman⁵ reported

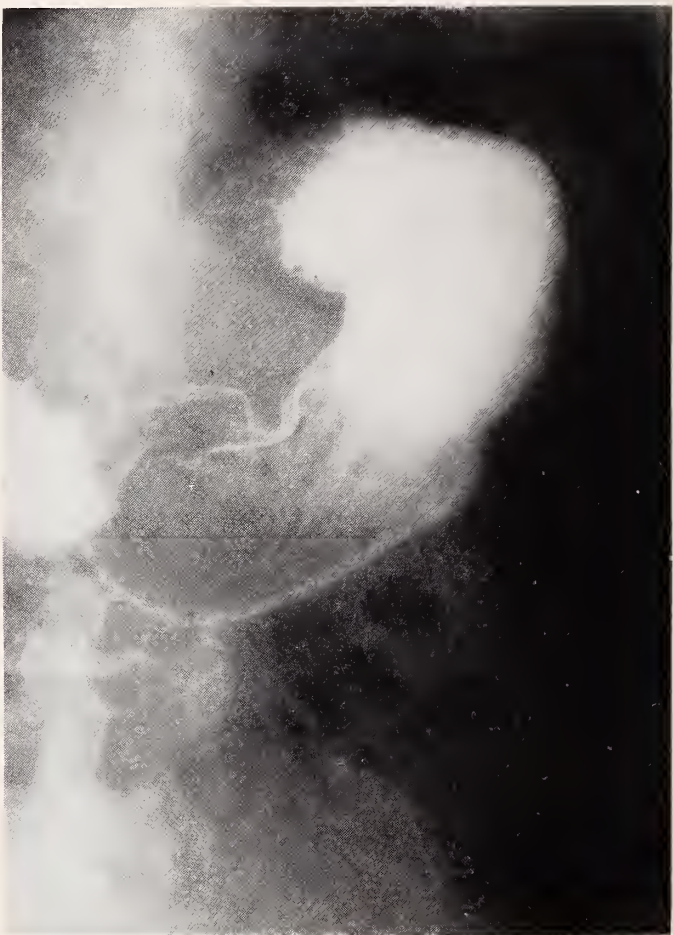


FIGURE 12

Leiomyoma of the Stomach demonstrated by a roentgenogram after a barium swallow (Courtesy of Dr. Hayes at the Johns Hopkins Hospital)

176 cases in which adenomas and leiomyomas (Fig. 12) were by far the most common types found.

TABLE I	
BENIGN TUMORS OF STOMACH AND DUODENUM	
EPITHELIAL TUMORS (111 CASES)	
Adenomatous Polyps	80 Cases
Adenomas	19 Cases
Polyposis	10 Cases
Papillomas	2 Cases
CONNECTIVE TISSUE TUMORS (65 CASES)	
Leiomyomas, Fibromyomas, Adenomyomas,	
Myxofibromas	44 Cases
Hemangiomas	6 Cases
Fibromas	6 Cases
Neurofibromas	5 Cases
Dermoid Cysts	3 Cases
Lipoma	1 Case

From Eusterman	Total	176 Cases
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These benign tumors are now recognized to occasionally be a cause of gastrointestinal bleeding and some become malignant. When they are removed by simple excision they should be examined immediately for evidence of malignancy and if malignancy is found a wider excision or resection should



FIGURE 13

Crater of malignant gastric ulcer situated on lesser curvature of stomach just proximal to pylorus and containing faint traces of barium. Compare with Fig. 9 to realize the difficulty in distinguishing benign from malignant lesions.

be performed even if this requires a second operation after the permanent sections have been read.

A satisfactory treatment of carcinoma of the stomach (Fig. 13) has not yet been found. Radiation and chemo-therapy have no effect so surgery remains the only method of treatment at present. However the results of surgical treatment leave much to be desired because only about 10 per cent of all the cases seen and only about 30 per cent of those cases without detectable metastases which are resected in the hope of cure survive for five years or longer. The discouraging thing is that these results have remained about the same for the past 20 years. Even these dismal results are better than those of any other form of treatment.

A trial with the routine use of total gastrectomy for carcinoma in any part of the stomach has apparently not increased the salvage rate and has produced gastric invalids in many instances, hence the operation of choice continues to be a partial gastrectomy when the tumor is situated in a part of the stomach which permits the removal of a safe margin of gastric tissue proximal to the tumor. When

the tumor is situated too close to the esophagus to permit removal of a sufficient quantity of normal gastric tissue proximal to it then a total gastrectomy is necessary.

The only advance that has been made in the treatment of this disease is the reduction in mortality of the operation itself and the recognition of the fact that the patients are more comfortable if a palliative resection is performed, even in the presence of metastases. This at least eliminates the primary growth so that the patient dies of his metastases which is a more comfortable death than one from obstruction and hemorrhage caused by a persisting primary tumor. I believe that a palliative resection is indicated when it is possible to do so even though it requires a total gastrectomy rather than leaving the tumor in place with or without a shunt.

Recently the brilliant work of Cole⁶ and his co-workers in demonstrating the spread of tumor cells through the blood and lymphatic vessels and in the operative field during an operation, and their experimental evidence that the incidence of metastases or recurrence can be markedly reduced by the use of antimalignant chemicals before, during and after surgery has raised high hopes that more cancers, including those of the stomach, may be cured. However, this is still in the experimental stage. Even though it seems promising we decided not yet to establish it as a routine for cancer cases being operated on at the Perry Point Veterans Hospital. We shall await better evaluation of the procedure by those who are concentrating on it. Their reports should be eagerly anticipated.

Malignancies of the duodenum occur, but only rarely. The most common type is a carcinoma of the ampulla of Vater (Fig. 14). These tumors are



FIGURE 14

Carcinoma of ampulla of Vater causing a filling defect in the duodenum in a roentgenogram after a barium swallow. (Courtesy of Dr. Hayes at the Johns Hopkins Hospital)

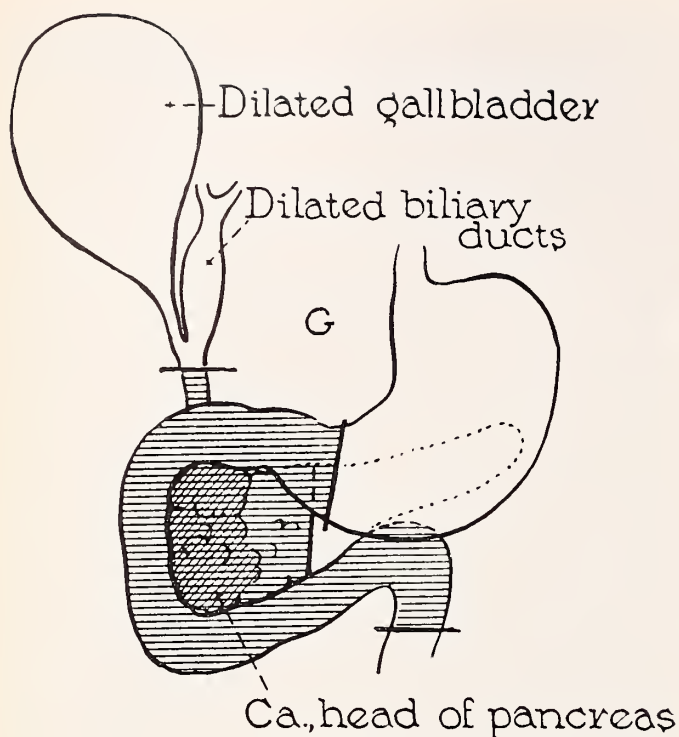


FIGURE 15

Extent of excision in a Pancreaticoduodenectomy. (Shackelford, *Surgery of the Alimentary Tract*, W. B. Saunders Co., Phila. 1955)

slow growing and usually of a low grade malignancy. The difficulty is in their diagnosis. About 29 per cent can be demonstrated by x-ray, about 60 per cent have the symptom of jaundice and less than half show some blood in the stool. They are being treated with encouraging success by a Whipple-Trimble pancreaticoduodenectomy which removes (Fig. 15) the distal portion of the stomach, all of the duodenum the distal portion of the common bile duct and the head of the pancreas. Bowel continuity is restored as shown in (C & D). The mortality of this operation for Ampullary Carcinoma is under 10 per cent and the five year survival rate is between 25 and 30 per cent. Furthermore, the survivors carry on a relatively normal life. This is a definite advance over former years when none were cured.

Some, although only slight, progress has been made in treating cancer of the head of the pancreas. Here again the Whipple-Trimble operation is the treatment of choice whenever the cancer is resectable. However there are certain difficulties peculiar to this particular lesion. The diagnosis is very difficult to make preoperatively, and even at operation it is hard to distinguish a cancer of the head of the pancreas from a non-malignant pancreatitis. Unfortunately, a biopsy of the pancreas with frozen section is not as helpful as in other areas because even the most skilled pathologist has great difficulty in determining the presence or absence of malignancy.

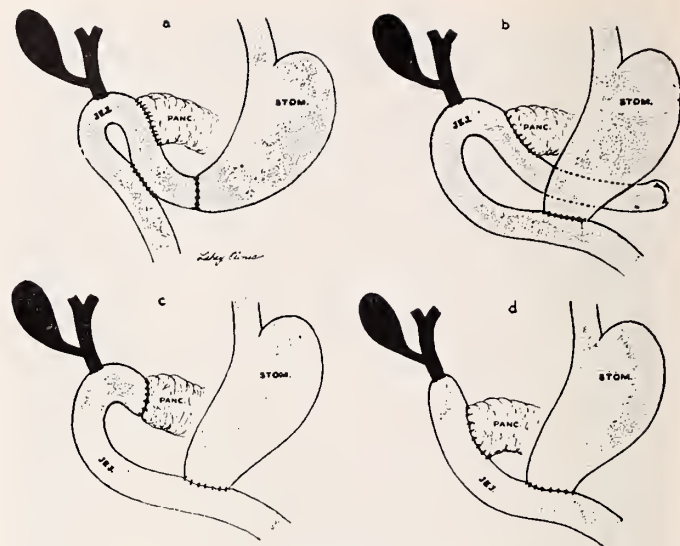


FIGURE 16

Methods of restoring bowel continuity after a pancreaticoduodenectomy. C and D are preferred. (Shackelford, *Surgery of the Alimentary Tract*, W. B. Saunders Co., Phila. 1955)

The surgeon may have to make the diagnosis by inspection and palpation alone. Furthermore, the tumor often invades the adjacent superior mesenteric or portal vein which cannot be detected until after considerable dissection and those veins cannot be sacrificed unless one is prepared to interpose a venous graft which would increase the magnitude of an already heroic operation. At operation the surgeon should look for the presence of metastases in the liver and in the regional lymph glands, removing one of the latter for frozen section. If metastases are present I abandon the operation. If there is no evidence of metastases in the liver or lymph gland the next move is to divide the gastroduodenal artery at its origin from the hepatic and to pass a finger along the portal vein and superior mesenteric vein posterior to the pancreas to see if they can be freed. If they are invaded I abandon the operation. If, on the other hand, the tumor has not invaded the portal system I proceed with the operation. In twelve such cases one died a postoperative death, eight died within two years of metastases but were comfortable during that time. Two have been living for three years and one for four years, but as yet none has lived for five years. Other surgeons have reported five year survivals without evidence of recurrence. Although the percentage of success is extremely low I believe the operation is worthwhile in selected cases. Many differ with this opinion.

Pseudocysts of the pancreas previously were treated by marsupialization and external drainage. Although this was a very safe method it has usually been followed by prolonged hospitalization and often by a persistent pancreatic fistula. More re-

cently these have been treated by internal drainage with a Roux-En-Y Cystojejunostomy. We have used this method in five cases with complete satisfaction. I believe that it is an advance.

The surgical treatment of chronically recurring pancreatitis is an unsolved problem towards which much recent work is being directed. I have employed sympathectomy in two cases followed by relief of the attacks of pain although the symptoms of recurring episodes of nausea and vomiting persisted. Both patients subsequently developed diabetes so apparently the operation did not cure the disease. I have abandoned it. In three critically ill patients we inserted T tubes into the Common Duct as an emergency procedure. They recovered nicely but when the T tubes were removed six months later the symptoms recurred. In only one case have we tried sphincterotomy and it was unsuccessful. This may have been due to inadequate technic and we have not had an occasion to try it again. I have had no experience with Bower's Choledochojejunostomy or with DuVal's Caudal Pancreatico-jejunosomy although the rationale of the latter is appealing. Neither have we ever employed subtotal or total pancreatectomy. Successes have been reported with all of these procedures but my experience is too meager to evaluate them.

Some advances have been made in both the diagnosis and treatment of diseases of the liver. Among these are the development of various liver function tests. Although these tests are very helpful they are far from infallible. We use them to differentiate the causes of hepatomegaly, ascites and jaundice but when the diagnosis is still in doubt, as is often the case, we frequently employ peritoneoscopy which has been very informative and reliable in identifying cirrhosis of the liver, primary or secondary tumors in the liver, hepatitis, the differentiation between obstructive and parenchymatous jaundice, tuberculous peritonitis and carcinomatosis. The procedure is performed under local anesthesia with minimal disturbance to the patient. The cases should be carefully selected because it should not be used when there is abdominal distention or when there has been a previous operation in the upper abdomen after which postoperative adhesions will prevent visualization of that area. A biopsy of the liver can be made under direct vision. It is a procedure that is not used as much as it deserves, in my opinion.

There have also been advances in the surgical treatment of some lesions of the liver. Recently surgeons have demonstrated that either the right or the left lobe of the liver can be removed without harm to the patient. As a result, benign and malignant tumors localized to either of these lobes have been removed with apparent success and without

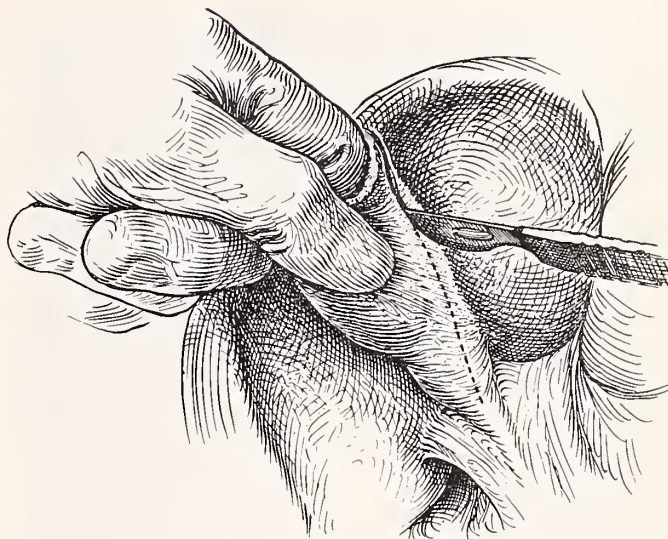


FIGURE 17

Insertion of finger within the gallbladder for guidance of a difficult dissection.

impairing the patient's subsequent health. These operations have been associated with a surprisingly low mortality.

In recent years there is an increasing tendency to remove an acutely inflamed gallbladder rather than waiting for the acute attack to subside as in former years. This decreases the expense of prolonged hospitalization and the incidence of complications if the operation is performed by a careful surgeon who identifies all of the structures before he clamps, cuts or ligates any of them. When this is difficult it is helpful to insert a finger inside the gallbladder (Fig. 17) to guide the dissection from above downwards until the cystic artery, cystic duct, common duct and hepatic duct have been positively identified before any of these presumed structures are clamped or divided.

Another recent development is the employment of cholangiography during the course of an operation. Unfortunately it requires special equipment and some experience in interpreting the films to be reliable. The procedure is not infallible but is an advance in surgical technic.

Not many years ago when intestinal intubation was introduced it was over enthusiastically used for the definitive treatment of all types of intestinal obstruction. The lesson has been learned that the treatment of mechanical obstruction is prompt operation as soon as the patient has been properly prepared by fluid and electrolyte replacement and that the proper place for intubation is as an adjunct to surgical operation. The reasons for this are that with a mechanical obstruction by adhesions, herniation or other causes there is a definite risk that the blood supply to the involved bowel may become compromised if the obstruction is al-



FIGURE 18

Intestinal Obstruction diagnosed by presence of fluid levels seen in roentgenogram of the abdomen taken with the patient in an upright position.

lowed to persist. The length of time before the gut will lose viability is unpredictable. Hence the recent tendency is to place a tube into the stomach in the hope that it may pass lower but without special efforts to accomplish this, apply suction to the tube, replace the fluid and electrolytes and operate as soon as this has been accomplished. In many cases one finds at operation that the blood supply to the bowel has been compromised but that the gut is still viable while if there had been a longer delay it might probably have become nonviable and required a resection with its greater risk. The mortality from acute intestinal obstruction is appreciably lower today than it was in previous years, partly because of prompt recognition of the condition by abdominal roentgenograms (Fig. 18).

About one half of our patients with an abdominal aneurysm have had the symptoms of cramping

abdominal pains, nausea and vomiting and abdominal distention. Most of these have been sent to the hospital with a diagnosis of partial intestinal obstruction without the possibility of an aneurysm having been considered.

In two of our patients an unsuspected abdominal aneurysm had eroded into the jejunum and was the unsuspected source of puzzling intestinal bleeding for several days before suddenly rupturing to produce a fatal, exsanguinating intestinal hemorrhage, the cause of which was discovered only at necropsy. It is important that aneurysms be recognized because their resection and replacement with an aortic graft is very successful and one of the more brilliant of the newer advances in surgery in this area. When thought of, the diagnosis can often be made by palpating a pulsating abdominal mass or by hearing a systolic murmur when the stethoscope is applied to the abdominal wall.

In conclusion I have mentioned some of the advances in upper gastrointestinal surgery which have made the greatest impression on me since my residency days of 1929-1934. Few problems have been completely solved and many more await solution, but progress has been made and the practice of gastrointestinal surgery today is less frustrating and more rewarding, psychically if not financially, than it was for our teachers who pioneered in this field and to whom we are indebted.

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A Study Of Constituents Of The Bloods Of Mother And Infant At Birth

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EFFORTS to lower perinatal morbidity and mortality have been successful to a most remarkable degree in the last 20 to 30 years. However, in the past few years, no great strides have been made. As a matter of fact, in the last year there was actually a slight increase in perinatal mortality. The greatest mortality is experienced within the first day or two of life. Therefore, it was felt that the actual determination of some of the blood components (chemistries, electrolytes, etc.) at birth might point the way to improved care and possibly result in an improved morbidity and mortality experience.

Previous work done in this area had been to some extent limited. In some areas, bloods of fetus and/or mother were studied intensively at birth.¹ This was especially true in the case of blood sugars because of the relationship of diabetes and its problems with both mother and child. Other constituents²⁻⁸ were studied at various times after birth with the variation in time studied being from one day to seven days.

To determine the values of the various components of the blood at birth, samples of blood were taken from the umbilical cord immediately after the birth of the infant and at the same time blood was drawn from the mother. This was done in 18 cases of uneventful vaginal deliveries, four elective Caesarean Sections and one Caesarean Section in labor. During the course of study, evidence was found of approaching acidosis in mother and baby, so in the last nine cases the CO₂ combining power and blood acetone studies were repeated in

the babes after approximately 24 hours of life during which time the infants received no fluids.

The laboratory determinations were carried out using the following techniques: Blood sugar by the method of Folin-Wu;⁹ for the B.U.N., Karr's technique¹⁰ was used; for uric acid, Brown's technique¹¹ was followed. Sodium and potassium levels were determined on the Beckman-DU spectrophotometer.¹² For chlorides, the VanSlyke-Miller modification of Sendroy¹³ was used. The CO₂ combining power was determined by VanSlyke's manometric method.¹⁴ For albumin, globulin and total protein, Kingsley's method¹⁵ was used. Blood acetone was tested for with a sodium nitroprusside technique.¹⁶

The individual values obtained are found in Table I Parts A, B and C.

This data was then subjected to statistical analysis. In each case a cumulative distribution of measurements was prepared to obtain estimates of the various characteristics of the sample. To avoid repetition we will demonstrate the graph for blood sugar for the mother, (all other determinations were done in a similar manner and are evaluated), and give only the results on all other components.

The graph, Table II, represents the empirical cumulative distribution of measurement. The graph is based on a sample of 18 cases (the "normal" vaginal deliveries). Various statistics are obtained from this graph: The lower quartile of the sample is 104 mg per cent (25 per cent of the measurements in the sample are less than 104); the median is 118 mg per cent (50 per cent of the sample was less than 118 mg per cent, the upper quartile was 128 mg per cent); the lowest value in the sample was 96 and the highest value was 137, therefore the range was 41 mg per cent. The sample size was 18 cases and the average value of the 18 measurements was 116.6 mg per cent. As noted above, similar type empirical distributions were made of all components for which we tested. The results obtained are given in Table III.

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We are grateful to D. G. Friedman, Sc.D., who, with the assistance of P. O. Pruett, analyzed our figures and prepared all of the statistical analyses.

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TABLE I
PART A

NO.		1	2	3	4	5	6	7	8	9	10	11	12	13
				URIC				TOT.			CO ₂		BABY 24°	BABY 24°
NAME		SUGAR	B.U.N.	ACID	NA	K	CL	PROT.	ALB.	GLOB.	DEL.	ACET.	ACET.	CO ₂
C.G.	Mother	137	11.0	2.2			100	6.8	4.8	2.0	18.0			
	Baby	114	9.0	3.0			95	6.3	4.6	1.7	18.8			
A.M.	Mother	128	7.5	3.5			106	5.8	4.0	1.8	17.0			
	Baby	109	6.5	3.3			110	5.6	4.0	1.6	20.2			
U.P.	Mother	137	11.5	3.0	139	4.6	107	7.2	4.4	2.8	20.0			
	Baby	109	11.5	2.5	134	4.8	108	7.1	4.7	2.4	22.3			
M.D.	Mother	100	12.0	2.5	138	4.2	109	6.3	4.0	2.3	18.0			
	Baby	91	12.0	2.4	138	4.7	100	5.7	4.3	1.4	21.0			
C.I.	Mother	114	8.5	2.2	138	4.7	115	5.6	3.9	1.7	20.5			
	Baby	104	5.0	2.2	134	5.5	112	5.7	4.0	1.7	22.0			
F.L.	Mother	96	6.0	2.7			118	6.3	4.0	2.3	18.2			
		91	6.0	2.5			112	6.3	3.9	2.4	19.0			
D.C.	Mother	123	10.5	2.2	132	4.3	101	6.1	4.2	1.9	19.4			
	Baby	114	10.5	2.2	124	5.4	104	5.7	4.0	1.7	23.0			
J.M.	Mother	123	9.5	3.2	147	4.0	109	6.6	4.6	2.0	20.2			
		104	7.0	3.2	150	4.8	110	5.6	4.2	1.7	22.4			
L.A.	Mother	96	17.5	4.3	114	4.4	108	5.9	4.3	1.6	19.4			
	Baby	86	18.0	4.8	145	4.8	110	5.7	4.0	1.7	23.5			
M.R.	Mother	137	19.5	4.1	140	4.9	101	6.0	4.7	1.8	8.2			
	Baby	118	22.0	4.1	137	5.0	100	5.7	4.2	1.5	21.5			
Z.J.	Mother	104	9.5	3.3	139	4.7	104	5.9	4.0	1.9	19.2			
	Baby	96			140	5.0	105	5.2	3.9	1.3	20.2			
S.R.	Mother	118	8.0	2.9	141	4.1	98	6.1	4.0	2.1	19.0	sl.tr.		
	Baby	104	6.0	2.7	138	5.4	101	5.6	3.7	1.9	25.6	1:4		
												sl.tr.		
T.A.	Mother	118	9.0	4.1	141	4.8	102	5.9	4.2	1.7	17.8	o		
	Baby	96	11.0	3.5	136	4.8	104	5.6	4.6	1.0	18.2	o		
W.S.	Mother	100	8.0	3.5	137	4.8	95	5.7	3.7	2.0	19.0	tr.		
	Baby	96	6.0	3.2	137	5.0	102	5.4	3.7	1.7	19.6	o	o	18.0
Z.E.	Mother	109	6.5	5.9	145	4.7	100	5.7	4.0	1.7	16.0	tr.1:2		
	Baby	109	6.0	6.2	145	4.8	104	5.6	3.9	1.7	18.4	o	o	15.6
S.S.	Mother	118	10.5	3.2	135	4.4	100	5.6	3.9	1.7	16.4			
	Baby	91	11.5	3.2	144	4.8	103	5.0	3.5	1.5	20.0	o	o	17.2
F.R.	Mother	123	9.5	1.8	143	4.1	104	5.8	4.4	1.4	18.0			
	Baby	104	10.0	1.8	141	5.2	103	5.9	3.9	2.0	20.4	sl.tr.	sl.tr.	17.0
R.B.	Mother	118	6.0	1.5	141	4.1	99	5.9	4.0	1.9	18.6			
	Baby	104	6.0	2.0	142	5.8	102	5.6	4.0	1.6	19.2	o	o	17.0
Unit of Measure		mg%	mg%	mg%	meq/liter	meq/liter	meq/liter	Gm.%	Gm.%	Gm.%	meq/liter			meq/liter

TABLE I
PART B
CAESAREAN SECTION IN LABOR

NO.		1	2	3	4	5	6	7	8	9	10	11	12	13
				URIC				TOT.			CO ₂		BABY 24°	BABY 24°
NAME		SUGAR	B.U.N.	ACID	NA	K	CL	PROT.	ALB.	GLOB.	DEL.	ACET.	ACET.	CO ₂
G.P.	Mother	146	8.8	3.6	137	4.1	95	6.1	4.0	2.1	19.8	o		
	Baby	118	7.5	3.3	139	4.2	94	5.2	3.3	1.9	21.5	o	o	19.0
Unit of Measure		mg%	mg%	mg%	meq/liter	meq/liter	meq/liter	Gm.%	Gm.%	Gm.%	meq/liter			meq/liter

TABLE I
PART C
CAESAREAN SECTIONS

NO.		1	2	3	4	5	6	7	8	9	10	11	12	13
				URIC				TOT.			CO ₂		BABY 24°	BABY 24°
NAME		SUGAR	B.U.N.	ACID	NA	K	CL	PROT.	ALB.	GLOB.	DEL.	ACET.	ACET.	CO ₂
S.R.	Mother	350	6.0	3.0	131	4.4	103	5.2	3.2	2.0	20.0	o		
	Baby	91	5.5	2.8	132	4.6	104	5.0	3.3	1.7	23.6	o	o	18.2
C.O.	Mother	118	6.0	5.3	130	5.0	94	5.6	3.9	1.7	20.2	sl.tr.		
	Baby	109	5.5	4.9	139	5.0	96	5.0	3.3	1.7	25.4	sl.tr.	sl.tr.	16.2
F.E.	Mother	170	7.0	4.1	134	3.7	100	5.2	3.3	1.9	16.2			
	Baby	114	9.0	4.3	138	4.0	102	4.6	3.0	1.6	20.8	o	tr.	16.0
D.R.	Mother	146	9.0	3.6	133	3.8	99	5.4	3.5	1.9	20.2			
	Baby	132	11.5	3.6	136	4.8	96	5.7	3.7	2.0	22.0			
Unit of Measure		mg%	mg%	mg%	meq/liter	meq/liter	meq/liter	Gm.%	Gm.%	Gm.%	meq/liter			meq/liter

The estimates of our statistics in the five cases of Caesarean birth are given in Table IV.

without fluid does confirm the approaching acidosis as seen in the babies delivered vaginally.

It should be noted that the values given in this table should be used with caution inasmuch as the sample is small. Further, the blood sugars are distorted by the routine introduction of intravenous glucose/water prior to surgery. However, the increase in blood acetone and the decrease in the CO₂ combining power after keeping a baby for 24 hours

SUMMARY AND CONCLUSIONS

We have studied and presented our findings of various components in the blood of mother and newborn at birth. In general, those of the newborn tend to approximate the concentrations found in the mother. An appreciable difference was found in the blood sugars. The slightly higher potassium in the baby indicates need for further study. However, the main finding was approaching acidosis of the mother and baby. This should be expected under present day labor and delivery techniques, as most mothers receive little or no fluid during labor. This condition in the newborn is further aggravated by present pediatric practice of withholding fluids in the immediate perinatal period. Frequently, the more delicate the baby (prematures), the longer fluids are withheld. In view of the newborn's susceptibility to acid-base disturbance, it would appear that early and adequate hydration would benefit the newborn and might be a significant factor in further reducing perinatal morbidity and mortality.

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TABLE II

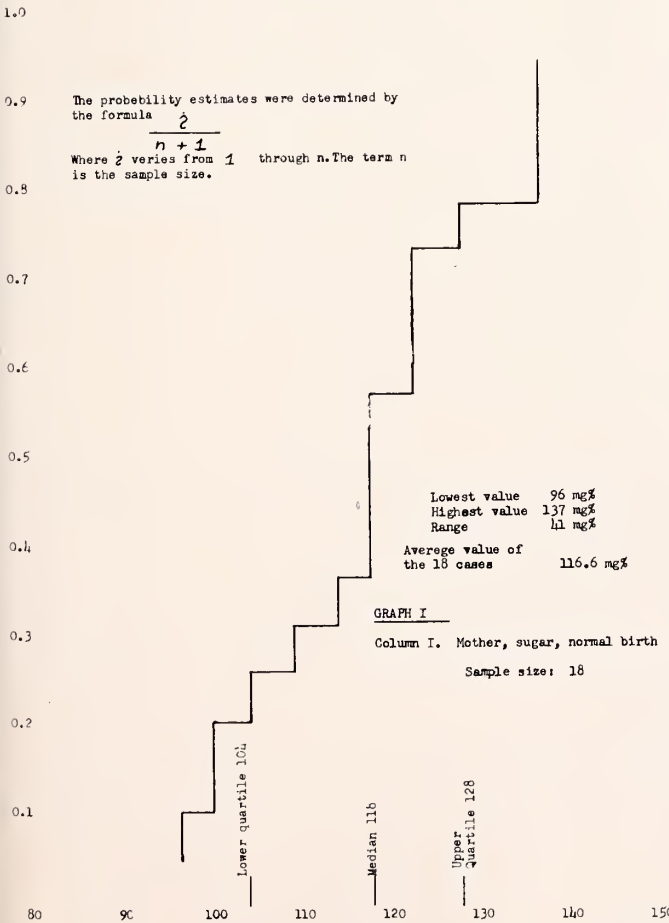


TABLE III
NORMAL BIRTH

		UNIT OF MEASURE	LOWER QUARTILE (LOWER 25%)	MEDIAN	UPPER QUARTILE (UPPER 25%)	LOWEST VALUE	HIGHEST VALUE	RANGE	SAMPLE SIZE	AVERAGE
Blood Sugar	Mother	mg%	104.0	118.0	128.0	96.0	137.0	41.0	18	116.6
Blood Sugar	Baby	mg%	96.0	104.0	109.0	86.0	118.0	32.0	18	102.2
B.U.N.	Mother	mg%	7.5	9.5	11.5	6.0	19.5	13.5	18	9.9
B.U.N.	Baby	mg%	6.0	9.5	11.5	5.0	22.0	17.0	17	9.6
Uric Acid	Mother	mg%	2.2	3.2	4.1	1.5	5.9	4.4	18	3.1
Uric Acid	Baby	mg%	2.4	3.1	3.5	1.8	6.2	4.4	17	3.1
Sodium	Mother	meq/ liter	137.0	139.0	142.0	114.0	147.0	33.0	15	138.0
Sodium	Baby	meq/ liter	136.0	139.0	145.0	124.0	150.0	26.0	15	139.0
Potassium	Mother	meq/ liter	4.1	4.5	4.8	4.0	4.9	0.9	15	4.5
Potassium	Baby	meq/ liter	4.8	5.0	5.4	4.7	5.8	1.1	15	5.1
Chlorides	Mother	meq/ liter	100.0	104.0	109.0	95.0	118.0	23.0	18	104.2
Chlorides	Baby	meq/ liter	102.0	104.0	110.0	95.0	112.0	17.0	18	104.7
CO ₂ at Delivery	Mother	meq/ liter	18.0	18.6	19.4	16.0	20.5	4.5	18	18.5
CO ₂ at Delivery	Baby	meq/ liter	19.2	20.4	22.4	18.2	25.6	7.4	18	20.9
Total Protein	Mother	Gm%	5.8	5.9	6.3	5.6	7.2	1.6	18	6.1
Total Protein	Baby	Gm%	5.6	5.7	5.9	5.0	7.1	2.1	18	5.7
Albumin	Mother	Gm%	4.0	4.1	4.4	3.7	4.8	1.1	18	4.2
Albumin	Baby	Gm%	3.9	4.0	4.3	3.5	4.7	1.2	18	4.1
Globulin	Mother	Gm%	1.7	1.9	2.1	1.4	2.8	1.4	18	1.9
Globulin	Baby	Gm%	1.5	1.7	1.9	1.0	2.4	1.4	18	1.7

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TABLE IV
CAESAREAN BIRTH

COLUMN NUMBER		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	LOWEST VALUE	HIGHEST VALUE	RANGE	SAMPLE SIZE	AVERAGE
B.U.N.	Mother		7.0		6.0	9.0	3.0	5	7.4 mg%
	Baby		7.5		5.5	11.5	6.0	5	7.8 mg%
Uric Acid	Mother		3.6		3.0	5.3	2.3	5	3.9 mg%
	Baby		3.6		2.8	4.9	2.1	5	3.8 mg%
Na	Mother		133.0		130.0	137.0	7.0	5	133.0 meq/liter
	Baby		138.0		132.0	139.0	7.0	5	136.8 meq/liter
K	Mother		4.1		3.7	5.0	1.3	5	4.2 meq/liter
	Baby		4.6		4.0	5.0	1.0	5	4.5 meq/liter
Blood Sugar	Mother		99.0		94.0	103.0	9.0	5	98.2 mg%
	Baby		96.0		94.0	104.0	10.0	5	98.4 mg%
Blood CO ₂ at Delivery	Mother		22.2		19.8	20.2	.4	5	19.7 meq/liter
	Baby		22.0		20.8	25.4	4.6	5	22.7 meq/liter
Tot. Protein	Mother		5.4		5.2	6.1	.9	5	5.5 Gm%
	Baby		5.0		4.6	5.7	1.1	5	5.1 Gm%
Albumin	Mother		3.5		3.2	4.0	.8	5	3.6 Gm%
	Baby		3.3		3.0	3.7	.7	5	3.3 Gm%
Globulin	Mother		1.9		1.9	2.1	.2	5	1.9 Gm%
	Baby		1.7		1.6	2.0	.4	5	1.8 Gm%

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CONNECTICUT MEDICINE
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Congenital Tracheoesophageal Fistula

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WITH the advent of modern surgical techniques and potent antibiotics a whole new era has evolved in the therapy of congenital malformations. Prior to ten years ago little could be offered to an infant born with cardiac or gastrointestinal deformities. One such condition previously classed as hopeless is esophageal atresia with or without tracheoesophageal fistula. Death is inevitable shortly after birth unless rapid surgical intervention is forthcoming. Early surgical approaches to the problem of atresia included complex antethoracic reconstructions and later staged procedures utilizing cervical esophagostomy and gastrostomy first, followed by anastomosis of the proximal esophagus to the stomach within the chest. Primary anastomosis after elimination of the tracheoesophageal fistula is the ideal procedure and was first successfully accomplished by Cameron Haight in 1941.

EMBRYOLOGY

Because of the limited human material available for clinical study, there has been little agreement among investigators as to the reasons for development of esophageal atresia which is usually associated with a tracheoesophageal fistula. It has been pointed out⁶ that this malformation can be categorized as a "typical malformation." Such a malformation represents a continuum of forms ranging the entire gamut of degrees of abnormality. On the other hand, "atypical malformations" are those which are irregular in occurrence and do not resemble one another. These cannot be arranged in a continuous series of degrees of abnormality. Typical forms can be explained by varying degrees of disturbance of the same developmental process, while atypical forms are probably the result of some incalculable effect such as intrauterine trauma. Despite the probability that tracheoesophageal fistula is an independent malformation, it is associated with other significant congenital anomalies in about 30 per cent of patients.

About the fourth week of gestation a primordial respiratory tract outgrowth appears from the ventral side of the foregut.^{1,5} This anlage just cephalic to the level of the fourth visceral pouches (where the pharynx sharply narrows laterally) separates

from the gut. The separation is brought about in the four millimeter embryo by the growth of bilateral internal longitudinal ridges which fuse, separating the anterior (tracheal) portion from the foregut. The fusion extends cranialward, the laryngotracheal tube growing rapidly caudally. Only a small communication persists normally between the primitive esophagus and trachea (just behind the hypobranchial eminence) which eventually becomes the *aditus ad laryngem*. Some time before the seventh week of gestation it is believed that the esophageal lumen is obliterated by epithelial proliferation to recanalize during the eighth week.

The various concepts of causation of this anomaly are based on alterations in the pattern of development outlined here. Rosenthal⁷ divided the theories of development into three general groups: (a) retardation of esophageal development before recanalization of the lumen; (b) deviation of the tracheoesophageal septum development from normal without external mechanical pressure; and (c) changes in tension on the esophagus leading to septal deviation. Gruenwald³ postulated a plausible theory based on his study of a nine millimeter human embryo. He believed that the laryngotracheal tube grows more rapidly than the esophagus and as a consequence only complete separation of the two can result in normal development. If the esophagus remains abnormally attached to the tracheal anlage, the former will be drawn out by the latter and atresia will result. From the end of the composite tube then resulting from this abnormal pattern, the normal caudal part of the esophagus grows. This latter normal part corresponds to the portion of the anlage that had been caudal to the respiratory outgrowth originally. As a result, with continued development of the esophagus, a fistula results since the trachea and the esophagus are in continuity in this area. Gruenwald was of the opinion that the different degrees of separation failure lead to different forms of malformation.

Fluss and Poppen,² on the other hand, were of the opinion that mechanical pressure factors are important in the development of esophageal atresia. In particular they have noted anomalous blood vessels in close proximity to the atretic esophagus

in several cases at postmortem examination. They believed that an abnormal artery, such as an aberrant subclavian vessel or a right-sided aortic arch, may be prominent during the stage of development before the esophageal lumen is recanalized and before the esophagus is completely separated from the trachea. This artery interferes with recanalization by direct compression or by causing deviation of the esophagotracheal septum from normal which results in atresia. In addition, fistula formation usually follows because of pressure atrophy of the septum. An anomalous artery may not be the only factor here. Mere delay in differentiation of the arterial system as, for example, a temporary persistence of the connections between the fourth right aortic arch and the descending aorta behind the esophagus may be pressure enough to cause esophageal stricture.

CLINICAL PICTURE

Most commonly infants with esophageal atresia and tracheoesophageal fistula have been the result of uncomplicated pregnancies. A fair number are premature but these are in the minority in large series. Incidence in siblings is rare. The defect has been reported, however, several times in one of a set of twins.

Since ingested food cannot traverse the esophagus normally, all children with esophageal atresia are symptomatic. Further symptomatology is associated with the tracheal connection. The fistula may be nothing more than a tiny opening between a clinically normal trachea and esophagus, but usually a relatively large passage is present. In the former type symptoms appear later than the latter and diagnosis may be difficult. A rare patient may have an undiagnosed congenital fistula for several years.

The infant who, shortly after birth, has regurgitation of mucus even before feeding is started should be suspected of having an esophageal abnormality. Cyanosis is not usually present at birth, but if amniotic fluid or mucus has been aspirated, it will be prominent. Regurgitation of fluid immediately after the first feeding with or without cyanosis should be followed immediately by roentgenographic studies of the esophagus with a contrast medium. A soft rubber catheter cautiously placed into the esophagus through the nasopharynx will meet an obstacle and commonly will double back on itself. Before injecting contrast material into the catheter for films, a preliminary roentgenogram of the abdomen will usually reveal gas to be present in the gastrointestinal tract. This, of course, substantiates a distal tracheoesophageal connection in the presence of a proximal obstructed esophagus. Slow injection of iodized material will outline clearly the blind proximal pouch of the esophagus and an estima-

tion of the distance between the segments of the esophagus can sometimes be made.

Diagnostic studies should be completed with dispatch to prevent rapid deterioration of the child. When delay occurs, aspiration of the contents of the proximal esophageal pouch inevitably follows. Further inflammation arises when the acid gastric contents regurgitates into the respiratory passages via the fistula. The combination of preoperative dehydration from the lack of feeding and aspiration pneumonitis often results in fatalities even when the operative procedure itself has been technically successful.

Preoperative stabilization should include restoration of body fluids to normal with electrolyte supplements as indicated. An indwelling polyethylene venous catheter placed early in the therapeutic course makes fluid administration easy. Antibiotics are also given to forestall pulmonary infection and to lessen postoperative infections as much as possible. The patient should be placed with the head lower than the feet so that aspiration of mucus is discouraged. Frequent suctioning may be necessary to keep the proximal esophageal pouch as empty as possible.

Intubation anesthesia with face mask was utilized in most operations prior to six years ago. More recently endotracheal intubation has been found to be relatively atraumatic when skillfully done and offers the advantage of allowing a transpleural operation. Agents utilized most frequently are cyclopropane, ether and nitrous oxide.

A right thoracotomy via the fourth intercostal space is performed. Seldom must a rib be resected. A primary anastomosis is attempted after dividing and suturing the tracheoesophageal fistula. If the anastomosis cannot be done with ease because of wide separation of the esophageal ends, mobilization of the stomach through the esophageal hiatus of the diaphragm may give the added length needed. A secondary program of proximal cervical esophagostomy and feeding gastrostomy must be undertaken if a primary anastomosis is impossible. Many surgeons perform a gastrostomy for feeding purposes at the time of the initial operation, or feeding may be maintained by a nasogastric polyethylene catheter passed through the anastomosis into the stomach. The stomach tube is removed in either case as soon as it is practical and oral feedings are started usually about the tenth day after operation.

In the majority of cases only one tracheoesophageal connection is present, but rarely a second one exists. A careful search of the entire thoracic esophagus at operation will prevent missing such a situation which, unless corrected, can lead to continuation of symptoms.

Postoperative fatalities can be placed in three

groups according to the time of demise—immediate, intermediate, and remote. The first group includes those cases who are in poor condition preoperatively and who succumb to overwhelming pulmonary complications or to associated congenital anomalies which add to the physiological burden already present. A large number of these infants possess anomalies which at postmortem examination prove to be of such magnitude as to be incompatible with life regardless of the outcome of the surgery intended to correct the esophageal condition. The intermediate group of fatalities includes those infants who withstand the operative trauma well, but die during the first week or two after operation because of progressive respiratory difficulty despite vigorous therapeutic endeavor. This group seldom has associated congenital anomalies. The final group, those who die long after the initial operation, includes patients with complications arising in conjunction with further staged surgical attempts to correct the basic problem and also embraces those with recurrent fistulae.

SUMMARY AND CONCLUSIONS

A satisfactory surgical approach to the problem of tracheoesophageal fistula has been developed in recent years. In the presence of early diagnosis and

in the absence of dehydration and pneumonitis, the chances for cure are good. Awareness that the problem may exist in any newborn is the most important single factor which will lead to a high salvage rate of these children.

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Optimum Times For Nasal Deviation Correct

Nose surgery before a child is 14 should be kept to an absolute minimum, according to two Eastern otolaryngologists.

Surgery to correct nasal deviations should be delayed whenever possible until the nose has reached its full growth between the ages of 14 and 17, the doctors said in the current *Archives of Otolaryngology*, published by the American Medical Association.

Surgery in the early years may interfere with the nose's growth and result in further deviation. Surgery should be performed only in situations where the deviation interferes with the passage of air.

The doctors also reported a new operation for repairing the bone that divides the nose into two chambers. It is better, they said, to make several small vertical incisions near any buckled area of cartilage than to make one long incision.

This is recommended so that only a minimum of cartilage will be removed and that only a minimum of interference with the nutrition of the remaining cartilage will occur.

The authors are Dr. Joseph G. Gilbert, Roslyn Heights, N. Y., and Dr. Samuel Segal, Jr., Springfield, Mass.

Convulsions In Infancy And Childhood

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BETWEEN 6-7 per cent of all children have a history of one or more convulsions. After an accurate clinical diagnosis has been made, the treatment is relatively simple and the overall prognosis is good in most instances.

Types. The clinical types of convulsion are petit mal, minor motor, psychomotor, and grand mal seizures. In infants and children, abdominal epilepsy, hypoglycemia, low calcium tetany and febrile convulsions are also of importance.

Petit mal spells last less than 30 seconds. These simple staring spells occur without loss of consciousness, aura, movement or sequelae. They may be repeated many times during the day. They are rare before three years of age, and rarely continue into adult life.

Minor motor seizures may occur at any age, and may involve one muscle or a group of muscles. These may be associated with a degenerative disease, mental retardation or other CNS disorder. Flexion of the arms with or without an associated nodding of the head is the most frequent type. However, the entire musculature may be involved. If the seizures are of short duration, and the infant is less than two years of age, infantile myoclonic seizures (infantile spasms) are likely. Severely retarded infants with a disorder of the central nervous system frequently show this reaction, which has been called "lightning major" by Buchanan. A typical episode consists of a sudden lightning-like contraction of the flexor muscles of the trunk which may be accompanied by abrupt flexion of the arms on the chest, and flexion of the thighs on the trunk. The forearms may be retracted and the hands are pulled to either side of the head, so that the seizure may resemble the so-called "startle" reflex of young children. A sharp cry may precede or accompany the seizure. The face may assume a momentary blank or shocklike expression. In some instances, a sudden noise, manipulation, or feeding may precipitate the attacks, while in others attacks may occur just prior to the onset of true sleep or immediately on arousal. In our series, presumptive etiological factors can be divided into two groups on the basis of their developmental history. In the first group, the children are retarded in their motor development from birth. Their diagnoses include phenylketonuria, tuberous sclerosis, familial men-

tal deficiency, congenital toxoplasmosis, maternal diabetes, and subdural hematoma. In the second group, the children appear to develop normally until two to twelve months of age. Possible causative factors in this group include encephalitis, tuberculous meningitis, head trauma, etc., but the etiology is unknown in most instances.

Three kinds of psychomotor seizures in adults are distinguished by Lennox. The type most frequently seen in infants and children consists of a complicated but inappropriate motor movement. There is a gradual loss of postural control. The child may extend one arm and make a half turn to the side while slowly falling to the floor. After 3-5 minutes of unconsciousness the child may resume his normal activity.

Grand mal seizures are rarely focal in origin, although this point must be clarified by a careful history. The movements are usually tonic and clonic in nature, and self-limited. Status epilepticus occurs if grand mal seizures repeat themselves before the patient recovers from the previous seizure and constitutes a medical emergency.

Abdominal epilepsy should be considered in the differential diagnosis of recurrent abdominal pain of unknown etiology. Frequently, the episodes have a similar pattern; for example, the child complains of mid-epigastric pain, vomits and sleeps for 30 minutes to 2 hours. After waking up, the child is again completely well.

Convulsions of the newborn may be due to anoxia, vascular injury or some other form of cerebral insult. The prognosis is not always directly related to the degree of "insult" or to the clinical appearance of the infant. In general, the prognosis is better in the infant who does poorly during the first 24 hours and improves than it is in an infant who does well for 2-3 days and then has a series of convulsive episodes.

In older children, spontaneous hemorrhage due to congenital vascular anomaly or due to a cerebral vascular thrombosis of unknown etiology, is responsible for the sudden appearance of hemiplegia with or without a convulsion. Future convulsions are common in such children.

Hypoglycemic convulsions are rare and can generally be differentiated because the seizures fit into no well recognized pattern. A central origin rather than primary pancreatic disease has been postulated for some cases which are associated with mental deficiency.

Hypoglycemia, intoxications (such as lead), cen-

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From St. Christopher's Hospital for Children and the Department of Pediatrics of Temple University School of Medicine.

tral nervous system infections, acute nephritis, renal insufficiency, and allergy are known to cause convulsions in the pediatric age group. In most of these, the history will point toward the correct diagnosis. The most likely exception would be the convulsion which may be the initial manifestation of acute or chronic renal disease.

Febrile convulsions represent a special type of central nervous system disorder. They are essentially benign and self-limited. Less than one child in ten who has one or more febrile convulsions will have seizures without fever in later life. These are usually children who have a familial history of convulsions. The data of Yannet and Rennell clearly show that the diagnosis of idiopathic epilepsy should not be made until febrile convulsions give way to a convulsive disorder without an elevation of temperature.

Brain tumors are infrequent causes of convulsions in the pediatric age group, but they may occur, particularly if other symptoms are present. This is a marked difference from the condition found in adults. If the presence of a focal lesion is indicated by means of the history, physical examination or EEG, careful observation is necessary.

The diagnosis of a convulsive disorder and its treatment should be based on clinical rather than electroencephalographic grounds. In addition to a careful history and physical examination, skull films, a fasting blood sugar, BUN, and an electroencephalogram are desirable in most cases. Further laboratory studies such as lumbar puncture, blood calcium and phosphorus levels, arteriography and pneumoencephalography are required only in exceptional cases.

One of the most useful laboratory guides in the study of the convulsive disorder is the electroencephalogram. In most cases, it serves to confirm a clinical impression. The EEG findings are not always directly correlated with the number of con-

vulsions or with prognosis, so that the patient and not the EEG should be treated.

Since the normal adult waves do not appear until adolescence, interpretation is more difficult in the younger age groups. The 3/sec. spike and dome of petit mal and the 1-2/sec. slow spike and wave of infantile myoclonic seizures are the most spectacular patterns found by EEG in the presence of a convulsive disorder. Chronic subdural collections of fluid are frequently associated with absence of cortical activity over the area of the effusion. Because a high proportion of brain tumors are found below the tentorium in the pediatric age group, electroencephalographic findings are not generally useful in localizing the tumor. In special disorders of the central nervous system, such as hydrocephalus and hydranencephalus, the findings may be quite characteristic.

THERAPY

Phenobarbital is the most useful anticonvulsant drug, which has a mild sedative effect in addition to its anticonvulsant properties. Drowsiness is likely to occur if the initial daily dose is raised to more than 5 mg./kg. of body weight/day. Gum hyperplasia is occasionally seen in children who are given Dilantin. Toxic symptoms seen with this drug are ataxia and a peculiar euphoric behavior. In such cases, a 25 per cent reduction of the daily dose is almost always accompanied by a disappearance of the symptoms. Sudden complete withdrawal of Dilantin is likely to be followed by status epilepticus and should be avoided. In occasional cases, Mesantoin and Tridione are known to affect the hemopoietic system. Their use necessitates regular examination of the peripheral blood. Dietary regimens, which were widely used 10-15 years ago, have been discontinued except in a few clinics.

The following table indicates a sequence of therapy on the basis of the clinical manifestations:

	Grand Mal	Psychomotor	Petit Mal Simple	Petit Mal (Motor component below neck)
Phenobarbital (not more than 60 tid)				
3 mgm/Kg/d	1	1	1	1
Increased to 5 mgm/Kg/d	2	2	2	2
Dilantin (not more than 100 tid)				
3 mgm/Kg/d	3 (plus 2)	3 (plus 2)		3 (plus 2)
Increased to 5 mgm/Kg/d	4 (plus 2)	4 (plus 2)		4 (plus 2)
Increased to 8 mgm/Kg/d	5 (plus 2)	5 (plus 2)		5 (plus 2)
Mysoline (not more than 250 qid)				
125 mg H.S.	6 (plus 2 & 5)	6 (plus 2 & 5)		
250 mg H.S.	7 (plus 2 & 5)	7 (plus 2 & 5)		
250 mg bid	8 (plus 2 & 5)	8 (plus 2 & 5)		
Tridione (not more than 900 qid)				
20 mgm/Kg/d			3 (plus 2)	6 (plus 2 & 5)
40 mgm/Kg/d			4 (plus 2)	7 (plus 2 & 5)
60 mgm/Kg/d			5 (plus 2)	8 (plus 2 & 5)

With this system phenobarbital, calculated by the weight of the patient, is given first. Each change in medication is maintained for two weeks. After the maximum dose of phenobarbital, the next drug is added as indicated by the number. Mysoline is not used except as a supplement to phenobarbital and Dilantin. The medications are given in conveniently divided doses 2-3 times each day. Mebaral may be used instead of phenobarbital, but at twice the calculated dose of phenobarbital.

Recently, Dr. L. Sorel of Louvain University, Belgium, has reported that ACTH is an effective treatment in infants who developed normally until the onset of infantile myoclonic seizures. His results have been partially confirmed by preliminary reports. Gibbs suggests that electroencephalographic changes be used as a guide in treatment, and indicates that dosages as high as 50 units of ACTH for 30 days may be necessary. Our experience during the past year with this form of therapy has not been reported, but it is not nearly so encouraging.

One of the most important steps in the management of a child who has febrile convulsions is the reduction of fever. This may be done by sponge baths and with aspirin. The treatment of a prolonged febrile convulsion is the same as that of status epilepticus. In such instances, intramuscular sodium phenobarbital is the drug of choice. The first injection should be 6 mgm/kg. Then half this amount (3 mgm/kg.) should be given every 20 minutes until the convulsion is controlled. The total dose is rarely more than 10-12 mgm/Kg. Because residual damage due to the convulsions themselves has never been shown, rapid control by inhalation or intravenous application probably entails a greater risk. In addition, intravenous therapy is more likely to be followed by a second convulsion in several hours. The use of more than one drug is confusing and unsatisfactory.

Control of the seizure is only part of the management of a convulsive disorder. For the most part, they can be reduced to a point where they do not interfere with the child's activities. Even

in cases where the spells no longer occur, the personality and behavior problems can assume major proportions. A good result has been defined by Yannet as less than 5 spells per year (grand mal), satisfactory adjustment in school according to the mental ability of the child, a relatively normal community life in line with the age of the child, and satisfaction on the part of the parents concerning the epileptic state.

The prognosis is poorest in children who have a congenital cerebral defect. Where there is a family history of seizures, the child has the best chance of making a good adjustment. This is additional evidence that the attitude of the family toward the problem is extremely important. Infants with infantile myoclonic seizures are most difficult to control.

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Influenza Vaccination — 1958

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MUCH discussion arises periodically concerning vaccination against influenza. Definitive answers to many of the questions posed still are not available, and decisions made are frequently arbitrary. Nevertheless, much sound information has been acquired during the past fifteen years;^{1,2} and the unique opportunity for studies on vaccination afforded during the Asian pandemic was exploited by a number of investigators.³ However, before turning to a consideration of some of the problems of vaccination it seems appropriate to review briefly the events concerned with the pandemic of 1957-1958.

Asian influenza first made its appearance in southwest China in February 1957 and during the next three months spread to various parts of the Orient. The pandemic struck with full force in Australia, parts of South America and other countries in the southern hemisphere in July and August. During this period the disease was carefully studied in Chile and elsewhere by teams of American experts;⁴ and, as predicted, the pandemic there proved to be a harbinger of similar outbreaks in the northern hemisphere, which occurred during the following fall and winter. The first cases recognized in the U.S.A. occurred in the late spring of 1957 among the crews of naval vessels, and shortly thereafter at military establishments that had received personnel returning from the Orient.⁵ Such outbreaks occurred in Newport, R. I., and San Diego, and Ford Ord, California. The disease soon appeared in various groups of civilians, first among high school students in Davis, California in late June, and soon thereafter among those attending a summer church conference at Grinnell, Iowa. Here the disease appeared to have been introduced by a student who had attended the meeting at Davis and who became ill en route to Grinnell. Another outbreak occurred at an International Boy Scout Jamboree held at Valley Forge, Pa. in mid-July. Delegates from all parts of this country, and a number of foreign nations as well, attended these meetings. Ill persons returning to their homes set up foci of infection in numerous communities and the disease was widely seeded throughout the U.S.A. during the early summer, but there was no

universal spread. In the meantime it had been discovered that the sera of most people contained no antibodies against the Asian virus. Thus, although the seed was widely sown in fertile soil, for reasons inadequately understood, community-wide outbreaks did not occur until the fall, some two or three months later. During the remainder of the summer of 1957 influenza showed little tendency to spread, and for the most part, there were only a few sporadic cases. An exception was a community-wide outbreak, the first of its kind, which occurred in Louisiana in August. Interestingly enough, in this community children are given a vacation in the spring, because of the strawberry harvest, and return to school in August. Shortly after the opening of schools an epidemic occurred in this area. In September, subsequent to the opening of schools throughout the nation, numerous localized and community-wide epidemics began to occur. These increased with astonishing rapidity and the pandemic reached its peak in the third week in October. As is well known, most communities were affected; in some the absentee rate was so high that schools and industrial plants closed. Fortunately, the mortality was low, and had its highest incidence at the extremes of life, especially in the elderly, and in certain other categories—pregnant women, and those suffering from rheumatic heart disease and chronic debilitating illnesses. The total number of individuals infected is not known but probably exceeds fifty per cent of the population. At the height of the pandemic the U. S. National Health Survey indicated that, every day, more than six million persons were sick in bed with influenza, pneumonia or related illnesses.⁶ In keeping with previous experience, the highest incidence occurred in elementary and high school students comprising the 5-19 age group. The decline of the pandemic was almost as rapid as its onset and the "first wave" was virtually over by the latter part of November. Relatively little influenza was seen following the fall peak incidence and the curve for pneumonia and influenza mortality had fallen almost to the expected level by the first of January. Shortly thereafter this curve began to rise and continued a steady climb, finally reaching its record peak, around the first of March, 1958, almost as high as that attained during the fall.⁵ No entirely adequate explanation for this "second wave" has been found because definite

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community-wide outbreaks of influenza did not occur during this period. However, influenza probably was largely responsible and many small circumscribed outbreaks and sporadic cases continued to occur throughout the winter and early spring. This was exemplified in Connecticut by an outbreak among medical students in January, one in a sanatorium in February, and another among an industrial group of Puerto Rican laborers in early June.

The extent of the Asian pandemic and the possible influence of vaccination upon its course are the subjects of continued study. Recently, some interesting data have been gathered concerning the prevalence of antibodies in residents of New Haven.⁷ Sera from a large group of children were obtained in May 1957, before Asian influenza had made its appearance in the New Haven area, and again in May 1958, several months after the pandemic had passed. As one would expect from experience elsewhere, antibodies against the Asian virus were almost totally lacking in the 1957 sera, whereas by 1958 more than 50 per cent of the same individuals had developed antibodies. About half of the subjects did not give a history of having been vaccinated, and the development of antibody was greater among the unvaccinated than among the vaccinated. This suggested that the vaccine had afforded some protection; but it probably was of a temporary nature since antibody had now disappeared from the sera of many of those vaccinated, if it had ever been present. The age groups studied so far are the ones in which Asian influenza had its highest incidence, and these findings may not be applicable to adults or to younger children.

As in the case of other vaccination procedures, one may first inquire whether influenza vaccine is sufficiently effective to warrant its use. A vast experience of some fifteen years of field trials by the Commission on Influenza of the Armed Forces Epidemiological Board and other groups has presented convincing evidence that vaccination against influenza does offer a considerable degree of protection.¹ In the early studies some of the more favorable figures have shown an incidence of about two per cent among vaccinated individuals as compared to about seven per cent among the unvaccinated, when the disease was caused by influenza A, and about five tenths per cent as compared to about twelve per cent when the infecting organism was influenza B. However, it was soon learned that, to be effective, a vaccine had to meet certain requirements. In particular, a strain of virus identical to or at least closely related to the one causing the epidemic must be contained in the vaccine. The necessity for this was first demonstrated in 1947 when A-prime strains first made their appear-

ance, and the available vaccine containing standard A and B strains offered no protection against infection with the new A-prime virus. In the years following 1947 several minor changes occurred but it was not until 1957 when the Asian variant appeared that a major change became evident. While the Asian virus belongs to the type A influenza group, it is not closely related to any previously known strains;⁸ and, before the pandemic antibodies against it were virtually absent in the population at large, except for a small number of individuals in the older age groups.⁹ The appearance of a new virus and the lack of antibody in the population made it seem certain that there were large numbers of highly susceptible individuals and that a pandemic was imminent. It also seemed probable that the polyvalent vaccines available would offer little if any protection. Spurred on by memories of the 1918 pandemic, great efforts were made to produce an effective vaccine; and commercial preparations of a monovalent Asian strain soon became available. The initial studies with the Asian vaccine were concerned with determining the antibody response to vaccination, while field studies were planned to test its effectiveness during the pandemic that was expected.

It was soon found that the Asian virus vaccine did produce antibodies in a proportion of subjects, the more potent the vaccine, the greater the number of individuals who developed antibody. It also was learned that dividing the total dose into two injections given two or more weeks apart was far superior to giving the same amount in a single injection. In one such study, 20 per cent of subjects given 1.0 cc of a vaccine containing 200 CCA units per cc had a significant antibody response, whereas 85 per cent of the group given 2 such injections separated by an interval of six weeks, developed antibodies. Sixty per cent of a third group given a single 1.0 cc dose of a preparation containing 400 CCA units per cc responded.¹⁰

There was no stimulation of antibody to the Asian virus when the standard vaccines not containing this strain were used, and the Asian virus appeared to be a poor antigen when compared to the older strains. Actually, however, in the latter case, the effect of a single injection of vaccine has the effect of boosting the level of antibody which is already present in low titer in most individuals. With the Asian virus there was no such recall phenomenon because there had been virtually no prior experience with this agent.

A number of studies have now been reported of various field trials of Asian vaccine during the pandemic. All show evidence of significant protection, but as one might expect this vaccine did not appear as effective as earlier ones used in epidemics due to the older strains of virus.³

One of the first trials was a study among volunteers in a penal institution.¹¹ Some 32 men were vaccinated with a single 1.0 cc subcutaneous injection of Asian strain vaccine while 23 were given an injection of saline. Three to four weeks later all were inoculated with throat washings collected from patients who had influenza and which were known to contain the Asian strain of virus. Eighteen (78 per cent) of those not receiving the vaccine became ill and Asian influenza virus was recovered from many. In contrast only 14 (44 per cent) of the vaccinated became ill. Thus it is obvious that while vaccination with a single rather small dose did not always prevent the disease, it did afford a considerable degree of protection. It also should be pointed out that this was a severe challenge, the subjects throats being massaged with a swab soaked in the inoculum in addition to their receiving the infectious material intranasally and by nebulization into the pharynx.

Controlled field trials employing a single subcutaneous injection of vaccine, in military personnel showed that, in general, the incidence of Asian influenza in vaccinated subjects was less than half that in the unvaccinated, and estimates of effectiveness of the vaccine ranged from 42 to 67 per cent.³ These studies also probably represented a severe challenge because it is well recognized that crowding, such as occurs in army camps, contributes to a high attack rate and, that a lesser challenge to immunity might be expected to prevail in uncrowded civilian groups.

Although the intradermal route of vaccination has been studied extensively in immunization against other diseases few studies of its effectiveness in influenza have been reported. It should be emphasized that before the pandemic most individuals had no Asian antibody and that immunization was primary and could not be expected to produce the "booster" effect which probably occurred after immunization against other strains of influenza with which the vast majority of the population had had some experience. Hilleman has presented evidence which indicated that 0.1 cc of Asian vaccines of 160 to 500 CCA unit-potency given intradermally resulted in almost as good an antibody response as 1.0 cc given subcutaneously.¹⁰ However, subsequent studies by Boger and others showed a relatively poor response to vaccine given intradermally.¹³ McCarroll and Kilbourne have reported a study in which the efficacy of two small doses of vaccine was compared with a single subcutaneous dose of 1.0 cc.¹⁴ A further comparison was made between the relative efficacy of intradermal vs. subcutaneous injection of similar doses of vaccine at similar intervals. Although all schedules were suboptimal the best antibody responses occurred

in those individuals receiving two doses of 0.5 cc each. Furthermore, when two injections of smaller amounts of vaccine—0.1 cc or 0.2 cc—were given, an almost equally good response was obtained. Small doses of vaccine given subcutaneously were just as effective, if not more so, than identical amounts given intradermally. Thus, at least in those having no prior experience with the Asian virus, division of the total amount of vaccine into two doses appears advantageous, and the subcutaneous route seems to be as effective as the intradermal route.

As yet no large-scale field trials comparing the two routes of inoculation have been reported, but it is to be expected that results of such studies would be in keeping with the antibody responses observed. Of interest are the results of a small study conducted by a group of Yale medical students in which two unvaccinated groups were compared with a group vaccinated with two 0.1 cc intradermal injections of Asian virus vaccine.¹⁵ The two intradermal injections of vaccine appeared to offer considerable protection since only three of 50 vaccinated subjects became ill, whereas about half of the unvaccinated groups succumbed. However, their immunity must have been short-lived, because some four to five months after vaccination, in January 1958, a "second-wave" of Asian influenza made its appearance and 25 of the 50 in the vaccinated group became ill, as compared to 14 of 100 unvaccinated controls. While this outbreak was not studied extensively, Asian influenza virus was isolated from some subjects, and several others of the vaccinated group had illnesses diagnosed as Asian influenza by serological means. Thus it would appear that while vaccination offered a considerable degree of protection, its effect was fleeting and that after a lapse of several months the vaccinated group was the most susceptible group of all. These findings also suggest that a large segment of the population, namely those who were vaccinated last year, escaped infection and have not been vaccinated again, probably is still highly susceptible to Asian influenza.

In spite of rumors and statements to the contrary there has not been an excessive incidence of febrile and constitutional reactions to Asian influenza vaccine. In a study of some 2,127 subjects ranging in age from 1 to 40, an incidence of 12.7 per cent constitutional symptoms was found in the vaccinated as compared to 10.5 per cent in the controls who received formalized saline.¹⁶ As is well known, however, there is a higher incidence of reactions in children and this is well illustrated in a study carried out by Jensen in which various age groups were vaccinated with the same lot of vaccine containing 200 CCA units per cc.¹⁶ Only

5.3 per cent of the 0-4 age group had febrile reactions, but this low incidence doubtless was partly due to the small amount (only 0.1 cc) of vaccine given. The highest incidence, 26 per cent, occurred in the 5-9 age group; in the 10-19 group 13 per cent had reactions and in the 20 age group the incidence fell to two per cent. Interestingly enough when 93 of these children were revaccinated a week later, only two developed fever. These findings are similar to results obtained by Curnen,¹⁷ and suggest that the fever may be due to the pyrogenic action of influenza virus to which, as Bennett¹⁸ and Atkins¹⁹ have shown, tolerance may develop. In another study Jensen reported the incidence of reactions in college students to whom different lots of vaccine were given, and also studied the effect of varying the potency of the vaccine, as well as the effect of the subcutaneous route as compared with the intracutaneous route.¹⁶ Slight reactions, sore arm or headache, were fairly common, occurring in from 13 to 34 per cent of those vaccinated subcutaneously with 1.0 cc of various lots. In general, increasing the potency of the vaccine (e.g. from 200 CCA units per cc to 750) produced a slightly greater incidence of mild reactions but did not materially affect the incidence of more severe reactions, such as chills and fever, which usually occurred in only three to four per cent of the subjects. Perhaps of greatest interest was the fact that in those vaccinated by the subcutaneous route the incidence of constitutional symptoms was not significantly greater than it was in those vaccinated by the intracutaneous route, whereby 10 times less vaccine was injected. Mild reactions occurred somewhat less frequently (14 to 16 per cent) in those who were vaccinated intradermally than in those vaccinated subcutaneously, and there was some variation in the number of reactions with different lots of vaccine. Surprisingly enough, of a control group receiving 1 cc of saline subcutaneously, about 14 per cent had mild symptoms while five per cent had more severe reactions. These

data suggest that the intradermal route in adults results in about as many reactions as does the subcutaneous route, even though a much larger amount of vaccine is administered by the latter. One procedure appears to be no more painful than the other, but the subcutaneous route definitely has an advantage in ease of administration and often can be carried out by nurses or other assistants, whereas intradermal inoculation may be difficult, even in the hands of those skilled in the procedure. Although no serious reactions were reported in the vaccine trials last year, an occasional severe reaction can be expected in individuals sensitive to poultry products, and, such sensitivity is a contra-indication to vaccination.

In order to produce a broader antibody response, and because A-prime or B strains of influenza may reappear, the vaccine should be a polyvalent one containing standard A, A¹, and B strains, as well as the Asian strain. Because many individuals have not had prior antigenic experience with the Asian strain it is felt that, for primary vaccination, adults should receive at least 400 CCA of the Asian strain. As already pointed out, giving the total amount in two injections, separated by an interval of a week or two (preferably at least two weeks), produces responses far superior to those obtained by a single injection. The intracutaneous route is not recommended for adults because the smaller amount of vaccine given induces antibody in fewer people, and often the amount of antibody produced is meagre. Because only a "booster" or anamnestic response is required for the standard strains, with which most people have had some prior experience, smaller amounts of these agents are required to produce an antibody response.

Commercial preparations based on the principles discussed above are now available and contain a total of 500 CCA units per cc—200 Asian, 100 A, 100 A¹, and 100 B.

The suggested methods of administration are shown in Table I and, in general, conform to the

TABLE I
RECOMMENDED METHODS OF INFLUENZA VACCINATION—1958*

AGE	VACCINATION STATUS	DOSE (C.C.)	TIME BETWEEN DOSES	ROUTE
Adult	Primary	1.0 (x2)	2-6 Weeks	S.C. or I.M.
Adult	Revaccination	1.0	—	S.C. or I.M.
3 mos.-5 yrs.	Primary	0.1 (x2)	1-2 Weeks	S.C. or I.D.
5-12 yrs.	Primary	0.5 (x2)	1-2 Weeks	S.C. or I.D.
13+		Same as Adults		
3 mos.-5 yrs.	Revaccination	0.1	—	S.C. or I.D.
5-12 yrs.	Revaccination	0.5	—	S.C. or I.D.
13+	Revaccination	Same as Adults		

* Polyvalent Vaccine containing 500 CCA/cc

S.C.—Subcutaneously

I.M.—Intramuscularly

I.D.—Intradermally

recommendations of the American Academy of Pediatrics.

Even after many years of experience there is still considerable difference of opinion concerning the indications for vaccination against influenza. In 1957, when the threat of a pandemic of unknown potential became apparent there was general agreement that all should be vaccinated as speedily as possible. However, this is the only time that a pandemic has been encountered since influenza vaccine has been available, and, for reasons discussed below, it does not seem probable that widespread influenza will recur this year. As already pointed out, a considerable percentage of the population, perhaps 50 per cent or more developed Asian influenzal antibody last year thus making it unlikely that any comparable outbreak will occur during the 1958-59 season. Furthermore, in the past, extensive epidemics in the northern hemisphere often have been preceded by epidemics in the southern hemisphere. This was true in 1957; but the winter is now over in the southern hemisphere and reports from South America and Australia indicate that there has been little if any influenza there. So far this fall only a few sporadic cases of influenza have been reported in the U.S.A. Our virus diagnostic laboratory has made only one isolation, an Asian strain obtained from a technician who may have acquired his disease in the laboratory. Although another pandemic is not expected to occur it seems certain that we will have some influenza during the next few months. Obviously it is impossible to make any exact predictions, but on the basis of past experience Asian influenza is likely to recur in the form of sporadic cases and relatively small circumscribed outbreaks. It cannot, of course, be stated categorically that routine vaccination of the general population should not be carried out. If this were done annually, as recommended by some authorities, maximal protection would be afforded. However, the protection conferred by vaccination is of short duration, probably no more than six months, and it seems unlikely that the beneficial results which might accrue from vaccination of the entire population at this time would justify the expense required. General vaccination should be carried out promptly if large-scale epidemics or a virulent form of influenza should appear. In addition, there is agreement that certain individuals and groups should be vaccinated annually because of the risk of serious or fatal disease, or of disruption of vital services. In the former category are those suffering from chronic debilitating diseases such as diabetes, cardiovascular-renal and chronic pulmonary dis-

eases, pregnant women and individuals who have recently undergone major surgical procedures. Groups for whom annual vaccination is most desirable include those concerned with health, public safety, utilities, transportation; also institutions and some industries where there is crowding or where a break in production might result in severe economic loss. During recent years a significant mortality has occurred only at the extremes of life and, because of this, some authorities also recommend annual vaccination for the old and the very young.

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Surgery Of Incurable Cancer

"It still happens that some [cancer] patients in whom the diagnosis is not certain undergo major surgical procedures without preliminary studies," says Dr. Gould A. Andrews, who adds that, even when neoplasm is not the most likely outlook, preparations should be taken with a view of that possibility. It is surely a crucial matter to know whether there is or is not metastasis present when a neoplasm is revealed.

In order to undertake a resection or to rule it out, it is vital to know the findings that can be obtained from employment of established preparatory procedures.

It is good to have on hand roentgenograms of chest, spine, skull, pelvis, and proximal long bones. Preoperative hematologic investigations are always needed. Presence of the pathologist is desirable for various reasons and certainly the radio-therapist should be on hand.

Satisfactory biopsy is required to avert possibly tragic consequences. In "dealing with potentially curable lesions it is a desirable surgical goal to avoid cutting into the tumor (to avoid seeding the neoplasm)," but "in the treatment of non-curable lesions, or those that seem to be so, the value of confirmation of the nature of the disease outweighs the disadvantages of possible dissemination."

Depending on the patient or the hospital facilities or both, other "palliative procedures may be planned or begun at the time of operation."

Important also are operative reports, which should be as complete as possible and readily available for future use. A patient already operated on may wish to consult another physician, and if there is not enough information concerning the surgical procedure and findings, another operation may very well have to be performed. Furthermore, a tumor should be adequately described; to say that "there was plenty of tumor" does not seem to indicate whether a lesion is resectable or "is based upon the presence of multiple areas of involvement, even when all are individually removable."

There are indeed many malignant lesions whose site of origin is unknown. However, careful study and documentation are imperative in the approach to cancer—and the fullest preparations for any eventuality are demanded in the best interest of patient and physician alike. (*Surgery Gynecology & Obstetrics* 107:787, December, 1958.)

Some Emotional Uses Of Foods

WILLIAM KAUFMAN, M.D.
Bridgeport

OUR eating behavior is conditioned by our culture, religious training, parents (particularly the mother), relatives and friends—and by our life experiences. Very early in life, each of us develops patterns of conditioned responses to specific foods, to eating, to persons preparing and serving our food, and to those sitting and eating with us. An individual's changing food likes and dislikes reflect his continuous personal adjustment, not only to food, but also to his past and present life experiences, and in some instances, even to his future expectancies.

In this article, I shall discuss some of these emotional uses of foods. Most of what I will have to say has been learned from my study of more than 1,200 private medical patients who consulted me during the past twelve years in my private practice of internal medicine. (See Table One)

During periods of starvation or famine, people will eat almost anything which promises temporary relief from hunger, whether or not such materials are digestible or nutritious. But in times of plenty, wholesome foods are often selected and eaten because they have certain emotional values over and above their hunger-allaying and nutritious properties. (See Table Two, which shows my classification of food likes and food dislikes).

For example, in times of emotional stress, many people unconsciously increase their intake of security foods, such as milk-products. Conversely, when the individual is no longer under emotional stress, he decreases the amounts of these security foods in his diet.

Similarly, if we are thwarted, or if we have failed to gain the approval of others, or if we feel sorry for ourselves, we unconsciously seek gratification by eating more of the reward foods—such as chocolate, hot dogs, candy or nuts.

If we need extra strength to compete successfully with others, to conquer our adversaries, or even to help us remain healthy, we may increase our intake of fetish foods. Many of the highly advertised foods become fetish foods. Some children don't feel strong unless they have Wheaties, Breakfast of Champions; some adults believe they can't sleep without first taking Ovaltine. Many laborers feel that if deprived of daily servings of red meat

and potatoes, they would become too weak to work. Some persons have the unconscious need to emphasize their adulthood through the overdetermined use of certain grown-up foods, such as coffee, tea, or beer—foods which once upon a time were forbidden to most of us.

When we are sad or lonely, we may have special need to recapture symbolically some treasured moments of past happiness through the eating of specific pleasurable association foods—such as baked beans, which remind us of our beloved Aunt Clarissa.

Then there are those who are impelled to attract the attention of others through the use of show-off

TABLE I
DIARY FORM

INGESTANTS		SYMPTOMS	
A. M.		Fatigue	
		Pain	
		Mental	
		Headache	
		Nasal	
		Gastric	
		Intestinal	
		Bronchial	
		Dermal	
		Cardiovascular	
N O O N		Etc.	
		EMOTIONS	
		Repressed Anger	
		Repressed Hostility	
		Repressed Resentment	
		Do-Don't Frustration	
		Environmental Frustration	
		Aggressive Outburst	
		Anxiety	
		Unusually Happy	
P. M.		Etc.	
		INTENSITY	
		One Plus Slight	
		Two Plus Moderate	
		Three Plus Severe	
		Four Plus Extremely Severe	
		DAILY HAPPENINGS	

My initial study of each patient included a medical history, psychological data, physical examination and certain laboratory studies. Then, many patients kept a food-symptom-psychological-self-observation-daily happenings diary, which I subsequently analyzed. Such a record supplied detailed day-by-day information about eating habits, possible food allergies, possible psychosomatic reactions to foods, and life situations.

Presented before Section I (Psychology) of The American Association for the Advancement of Science, on December 29, 1952, St. Louis, Missouri.

foods, or through the exhibitionistic use of food. They may eat odd things such as live goldfish, 9th day chick embryos, or fried grasshoppers, which may earn them national publicity. Others more modest in their aspirations may prefer to establish local reputations by gorging themselves publicly on watermelon, clams, pumpkin pie or hamburgers. The less imaginative in this group merely splash generous amounts of ketchup, mustard or black pepper over everything they eat.

Then, we have those who eat prestige foods, principally for their snob appeal. They learn to like caviar, truffles, expensive but smelly cheeses, and dry champagne of a certain vintage year. These are the people whose eyes hungrily search for the word "imported" on the label before they do business with the grocer.

TABLE II
CLASSIFICATION OF FOOD LIKES AND DISLIKES

FOOD LIKES	FOOD DISLIKES
Security Foods	Cultural Taboo Foods
Reward Foods	Religious Taboo Foods
Fetish Foods	Familial Taboo Foods
Party Foods	Individual Taboo Foods
Show-Off Foods	Cheap Foods
Grown-Up Foods	Unfamiliar Foods
Pleasurable-Association Foods	Unpleasurable-Association Foods
Familiar Foods Prepared in Familiar Ways	Familiar Foods Prepared in Unfamiliar Ways
Easy-To-Prepare Foods	Hard-To-Prepare Foods
Advertised Foods	Foods with Built-In Anxiety
Prestige Foods	Punishment Foods
Foods with Agreeable Sensory Properties:	Foods from Filthy Sources
Unspoiled Foods	Foods with Disagreeable Sensory Properties:
Proper-Color Foods	Spoiled Foods
Proper-Odor Foods	Off-Color Foods
Proper-Taste Foods	Off-Odor Foods
Proper-Texture Foods	Off-Taste Foods
Proper-Temperature Foods	Off-Texture Foods
	Off-Temperature Foods

A useful classification of foods according to emotionally determined reactions to symbolic or sensory values of specific foods. Attitudes of an individual toward food tend constantly to undergo modifications according to evolving life experiences and needs, as these can be satisfied or expressed through the use or avoidance of specific foods.

A given food may belong to more than one category in this formulation at any one time; e.g., for a given individual, chocolate ice cream may be a security food and a reward food, and if he eats it repetitively in large amounts for exhibitionistic purposes, it becomes for him a show-off food. An individual who uses chocolate ice cream in these ways may at a later time in life develop an aversion to it if he believes that on one or more occasions the overeating of this material made him very sick. Because of this unpleasurable association, he will then avoid eating this food.

Party foods are often pleasant combinations of reward, security, prestige and show-off foods.

Some persons use certain foods in an over-determined manner, to deny symbolically their religious, social, economic or national origins. The overeating of pork by a Jew or Moslem; the drinking of alcoholic beverages by a Moslem; the eating of beef by a Hindu are examples of this process. The newly rich may use certain luxury foods in excess, or even waste good food, as if to deny the memory of earlier economic poverty. Frequently, a newly arrived immigrant may eat excessive amounts of hot dogs and ice cream, which he dislikes, but believes help him deny his national origin by establishing his identification with Americans.

There are many other factors which help shape our food likes. People like foods prepared in familiar ways. Even then, to be emotionally acceptable, the food must have the right color, shape, taste, smell and texture. It must be served at the right temperature, at the right meal of the day, in the right order, in the right quantity, with the right tableware, in the right social setting, and sometimes, at the right season of the year.

Thus far, I have emphasized the emotionally desirable properties of food which, upon ingestion of the food, tend to create a sense of well-being over and above the satisfaction of hunger and nutritional needs. But there are also unfavorable emotional reactions to foods.

People usually avoid eating those foods they have been conditioned to dislike. Sometimes the mere mention of, the sight of, or even the thought of such foods is likely to cause a distressing emotional reaction.

Perhaps the most important group of foods to which people develop aversions are the taboo foods which may be prohibited by national, regional, familial, individual, religious, economic or political beliefs, and by folk superstitions. For example, our moral and ethical codes forbid the eating of human flesh, although accounts indicate that it is both tasty and nutritious. By extension, the taboo against cannibalism causes us to avoid eating the flesh of household pets, such as cats and dogs, which are considered by many as members of the family.

We avoid eating foods which we believe come from filthy sources. Sometimes, the mere thought of having eaten such a food will make us sick. One of my patients on a visit to Mexico enjoyed certain crisp tidbits called gusanitos del maguey. Some days later she became violently ill, after learning that the delicious morsels were fried, salted caterpillar grubs.

We also avoid eating certain unpleasurable association foods which remind us of unpleasant peo-

ple or unpleasant circumstances. These include the foods that have "built-in" conflicts, which were the original "parent-fight-child" foods, such as spinach and carrots.

There are aversions to foods sold at too cheap a price. Recently the French government in an experiment cut fine cheeses in half. Half of each cheese was for sale at its usual price; the other half, at a much lower price. And even thrifty French housewives refused to buy the low-priced cheese!

Most people tend to dislike familiar foods prepared in unfamiliar ways. Many of us have aversions to eating unfamiliar foods. We dislike foods with disagreeable sensory properties, such as spoiled foods, off-color foods, off-taste foods, off-texture foods, off-temperature foods.

In our culture, the woman of the house plans the menus, buys the food, prepares it, serves it, and cleans up after meals. In this position, she can express many different kinds of feelings through the way she shops for food, through the dishes she prepares, through the way she serves food.

If a housewife has limited sums of money, she can buy only certain kinds of food. If she has an adequate amount of money to buy top quality foods, she may economize to have extra cash which she can spend for other purposes without needing to give an accounting to her husband.

Sometimes a woman who resents her husband serves him none of the foods he enjoys. If her resentment reaches a point of intense hatred, meat is scorched, bread is stale, vegetables are cold and soggy. The husband begins his retaliation by criticizing her food and ends by paying her alimony.

Women who envy the interesting time men have at work, often exaggerate the kitchen martyrdom involved in preparing hot, home-cooked meals in order to gain concessions and rewards. I know one woman who on such a basis got herself an extra television set, a fur coat, a small car—and a separate bedroom. (Some husbands will do anything to ensure their continuing to get a hot, home-cooked meal).

Some women hate the feminine role of preparing food for the family. Most of these women were never prepared emotionally to accept a wifely role. The neglected subjects were cooking, housekeeping and sex. Being unable to render satisfaction in any of these fields, the wife may get an outside job and have the excuse that she is too tired to do her homework. In such instances, mutual dissatisfactions on the part of husband and wife may lead to divorce rather than correction of the underlying difficulties.

But fortunately many women enjoy cooking, housekeeping and sex. Such women give their fam-

ilies pleasure through properly planned meals which have that extra something which stimulates the eye, the nose, the palate—while at the same time giving relief from hunger—thus creating feelings of emotional security for the entire family group.

In the United States, the mother controls the infant's diet and manner in which he is fed. In the feeding and weaning process, the infant develops some of his basic feelings and conditionings to authoritarian figures in his life, and toward his culture. He learns to love, to hate, to fear insecurity, to enjoy security. He is even conditioned to learn desirable new types of behavior, or to give up undesirable ones in response to food rewards. If individuals other than the mother feed the infant, he is required to make some of his first social adjustments in this situation.

A mother's unconsciously determined attitudes toward the infant will determine the manner in which she feeds him. If her baby is a much-wanted one, he will receive loving care along with his feeding. The infant will be given sufficient time to enjoy eating his food. The verbal accompaniments of feeding will be soothing and the mother's muscular acts—including the ways she holds and pets her infant—will be considerate, smooth, and comforting. Part of the mother's job also is to protect the baby against punitive sibling rivalry and jealousy, while at the same time making each child feel emotionally secure.

However, if the infant is unwanted, the mother's attitudes may fluctuate from indifference to dislike to hatred, from resentment to rage—and from the enjoyment of punishing her infant to overwhelming feelings of guilt.

Such a mother finds it a nuisance to be tied down to the care and feeding of her unwanted baby. She holds the child tensely, often in ways that make feeding difficult for the baby; the verbal accompaniments of feeding are likely to be harsh and unsympathetic; the baby is more likely to be screamed at than cooed over; he is more likely to be called a mutt than a little darling. Spanking rather than stroking is the rule.

Not enough time is allowed by the mother for the feeding. At unpredictable intervals, she may deliberately hold her breast, the bottle or spoon out of reach of the hungry infant. This kind of baby may become a feeding problem by rejecting all food; or, a very cowed baby who just waits until mother is good and ready to feed him, and then grabs all he can as quickly as possible. But many of these babies become cry-babies, are hard to manage, and angry at non-specific protective figures who make it difficult to obtain adequate nourish-

ment without needing to struggle against punitive teasing. While the mother seems to enjoy her baby's discomfiture and misbehavior, she righteously administers physical punishment as part of the infant-training program.

Some mothers in this group underfeed their babies to the point of starvation. But sometimes a mother who hates her infant allays her unconscious guilt by deliberately overfeeding the baby. The overweight baby is supposed to prove to others that she must be a "good" mother.

As the infant grows, he goes through successive stages in his weaning behavior. He must learn to eat foods other than those originally equated to security and freedom from hunger. He has to learn to enjoy foods having different textures, odors, appearances and tastes. He must learn new habits of eating, including learning to chew and swallow in somewhat different ways from those he used when liquids were the chief source of his nourishment. Finally, as he grows up, the infant must be gradually conditioned to require less of his mother's time in feeding him, and he must learn to help feed himself.

Often children are classified by their parents in this way: a "good" child eats everything set in front of him. A "naughty" child rejects this or that food, or at times all foods. A "bad" child soils others with his uneaten food.

Sometimes a child learns *not* to eat certain foods whenever he wishes to cause parental anxiety and concern. This finicky eater gets special oral satisfaction from insisting that every morsel he eats have certain properties and be served under the supervision of his mother or a mother-substitute. Then, there are the angry children who enjoy most eating foods that make noises as they bite into them—such as celery, nuts, raw carrots and apples. When thwarted, they retaliate by biting, and then in adulthood find outlet for their oral aggressiveness by making biting remarks.

In general, the amount of food an individual eats daily—assuming there is a plentiful supply available—depends on established habit patterns, and the emotional and physical health of the individual. Stress resulting from a threatening situation may be met by overeating or undereating, or by increasing the intake of reward and security foods without changing the usual caloric intake. People tend to overeat when resentful and angry, when anxious or lonely, although rarely some undereat under these conditions.

Sometimes a middle-aged mother resenting the beauty of her adolescent daughter will try to make the girl less attractive through overfeeding. Others

seek to accomplish the same end by underfeeding their daughters.

Occasionally, a girl seeks to evade some of the responsibilities of womanhood by eating herself into an unattractive bulk. Her friends may say: "Lilly has such a pretty face. If she'd only lose weight, she'd have no trouble finding a husband!" Of course, her friends don't realize that the last thing Lilly wants is to assume the responsibilities of being a wife. On the other hand, some girls escape marriage by starving themselves into a state where others must take care of them—this is called *anorexia nervosa*.

A euphoric person usually has an excellent appetite, and doesn't seem very selective about foods. Occasionally, he will select the most expensive foods, as part of his expansive feelings about his own worth. A depressed person lives in a constricting psychic universe, and soon loses his appetite not only for living, but also for many specific foods or all foods. One woman told me that during those times when she is so angry with her husband that she would like to kill him, she becomes unaccountably depressed and cannot handle red meats in preparing meals. But she has no trouble in doing so at other times, when she is not depressed and angry with her husband.

Ordinarily, the less negative conditioning a person has had with respect to a specific food, the less attention he pays to it when he is about to eat it. When a person is suspicious about the goodness of the food, he may fear that it can harm him unless he is careful; and he loses his appetite as soon as he detects "imperfections" in his food: it may be too ripe, too raw, too rare, or too well-done. If he has a strong latent need to injure someone he knows, he may avoid eating meat, particularly rare meat. Not infrequently, persons dissatisfied with institutional living—such as college students or prisoners—may complain that the food is bad, or that it is not well-prepared, even though there is no realistic basis for such beliefs. An emotionally sick individual may lose weight by not eating in order to punish his family, or to get special concessions from others. Similarly, slow eating, picking at food on the plate, or returning it to be warmed up or changed in some specific way, may symbolically indicate that the person has the desire to have the giver of food (mother or mother-substitute) fuss over him. Eating too fast is often a sign of insecurity, and expresses the unconscious fear that someone will take the food away. Sometimes fast eating is merely an attention-getting mechanism.

To invite a person to dine with you is ordinarily a sign of friendship—or a matter of good business. To break bread with a stranger, to share salt with

him, is usually an indication of acceptance of the stranger. In fact, to refuse to eat with another person may be a rejection of proffered friendship. Hostility toward the host or hostess may be shown by rejection of specific items of food, or all items of food that are offered, whether or not a covering excuse is given. The unfriendly person may say: "I can't possibly eat all that," or "I'm not really hungry," meaning: "I don't enjoy your company, you've taken my appetite away." Although such excuses may have only their literal meaning, often the symbolic meaning is present. There are other ways of showing hostility at the table, for example, telling the hostess in a joking way that if she keeps on trying, maybe some day she'll be a good cook. Or, consider the guest who knowingly insists on telling stories that spoil everyone's appetite excepting his own.

Food can be used to express love and affection. Selecting favorite foods and cooking favorite recipes for family or guests is a sign of special favor. Giving a loved one the choice portion of a dish may be another sign of affection. Eating all that is set before one, asking for second helpings where these are available, complimenting the hostess on the excellence of her cooking—all have positive affective values.

A restaurant may become a place where your guest can act out some of his unconscious feelings toward you. He may try to identify himself with you by ordering exactly what you order. He may order nothing of what you order, either because he actually prefers something else, or because in no way does he want to identify himself with you. He may order the cheapest meal in the house as a method of devaluating his worth. He may order the most expensive meal on the menu as a method of punishing you by eating much more of your substance in terms of dollars and cents than he would if he were paying for the meal. He may have the feeling that you owe the best to him, and that you as a doting parent-substitute will not mind. No matter how many times he may dine with you, he will never pick up the check.

You may be amused at his selfishness, or angry or punitive. Amusement usually means that his selfishness doesn't make a dent in your economic or emotional reserves; anger means that you think he is taking undue advantage of you. You may punish your guest by never inviting him out again. Sometimes, individuals who order the most expensive dinners know that they will be rejected in the future by their hosts, so they try to get the most they can at the moment.

In contrast, we have the check-snatcher, who is so hungry for approval by others that he always

wants to be thought of in a kindly way as the supplier of comfort through food.

A person may try to show off by taking his guest to an expensive restaurant, to indicate that he knows where to get the best food and doesn't mind the expense, and that he wants to please his guest. Or, he may take his guest to a restaurant where the food is moderately priced in keeping with the realistic limitations that his financial status places on him. Or, he may extol the food served in a cheap greasy joint, so that he can enjoy seeing his guest eat inferior food.

Food can be used as a hostile instrument. Throwing rotten tomatoes, eggs or other foods has been one method of expressing disapproval of politicians and actors. Some may use food unconsciously to soil the tablecloth, the rug, or the clothing of others. This may symbolically be the equivalent in many instances of soiling hated ones with excreta—an infantile regression. (I have been surprised to find that many individuals who soil with food were at one time bed-wetters).

I want to mention the special problems of the aged and the sick. The aged like company with their food—and may stop eating when lonely. They need more time for eating than younger adults. Because of physical weakness, lack of muscular coordination and dental difficulties, they require easy-to-eat foods and a lenient attitude of their tablemates toward unavoidable sloppiness at mealtime. Also, because taste sensation may be blunted or abnormal, and digestive capacity may be decreased, frequent small feedings of foods attractive to the older person will maintain him in better nutrition than the conventional three square meals a day. Menus should be planned, if possible, to include foods which the older person enjoyed in his youth. Bread pudding or corn meal mush may add zest to the meals of some oldsters, who will eat better if the reward of such foods is held before them.

The sick also offer special problems, depending on the nature of their illness. Small meals are more palatable than large ones. The tendency of the sick person to regress to childhood levels is remarkable; and part of the getting well process involves weaning the person from the comforts of regression. In some disease conditions, such as allergy and peptic ulcers, patients learn that the eating of certain foods will surely make them sick—and they eat such foods mainly for the secondary gains they enjoy as a result of illness. This I have described elsewhere in detail.

Now a word about the future. Studies of human nutrition must be broad enough so that they will include a realistic consideration of the emotional needs of healthy and sick individuals. Merely fur-

nishing meals containing the arbitrary present-day recommendations of the National Research Council with regard to minerals, vitamins, calories, protein, fats, carbohydrate levels, is not enough to ensure emotional homeostasis. And often, not enough to maintain good nutrition, because patients reject meals that are emotionally unpalatable.

Perhaps, when there is recognition of the importance of studying food habits of patients, part of every psychological testing will include a careful study of the patient's diet in response to various

stresses of living, and in response to improvement in his general adaptation to such stresses. When this time comes, a psychologist, in addition to using other techniques, will perhaps be required to eat meals at the same table with the patient, under varying circumstances.

The better understanding of the meaning of specific patterns of eating behavior may lead to curative treatment of many diverse psychological disorders, and thus become an important factor in the overall reduction of emotional and mental illness.

The Compleat Surgeon

"The esteem in which surgeons are held by the public has undeniably diminished in recent years despite remarkable advances in scientific achievement," says Dr. John Paul North, and reversal of this situation largely rests with those who are at present in residency training.

Sound concepts in surgery and at least reasonable skill are indeed still required, but perhaps even more important is increased attention "to the attitudes and habits" developed during residency and later brought to practice.

There is undue attention given to short cuts—how soon will the major operations be permitted? Will the Boards be too stiff to pass? Will weekends be free? How much can be left to subordinates?

Traditional standards in surgery should be restored in order to regain public confidence. "Residency" should mean just that; armchair surgery cannot supplant "long vigils at the bedside." "Devotion to the care of his patients is an essential requirement for a good surgical resident."

There are other important requirements. At the top of the list is "absolute integrity." This involves self-criticism and honest self-appraisal.

A "superior resident" will always do more than is expected of him. A resident should have "intense scientific curiosity" and develop a broad range of interests. It is better not to be an exclusive specialist, hurriedly trained. The traditional medical internships, acquisition of concepts in other surgical specialties, and attention to "the socio-economic features of modern medical practice" should be part of the resident surgeon's development.

There is no need for sentimentality, but this is not to be confused with humanity and the great need to have "a love for people and the ability to let them know that he loves them."

Finally, in time the surgeon should become mature in his work. "This is the ability clearly to recognize situations when it is wiser not to operate." Hesitation before deciding on an operation denotes "wisdom and discernment," not timidity.

A resident will never have enough time for reading. But he must make time for this and thus form a lifelong habit. And after 24-27 years of education, on completion of residency the new surgeon should surely be proficient in speaking and writing "the King's English." (*Surgery Gynecology & Obstetrics* 107:784, December, 1958.)

167th ANNUAL MEETING
of the
CONNECTICUT STATE MEDICAL SOCIETY

Hamden High School
2040 Dixwell Avenue, Hamden, Connecticut

April 28, 29, 30, 1959

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PRELIMINARY PROGRAM

Tuesday April 28

AUDITORIUM

Annual Meeting of the House of Delegates

THOMAS M. FEENEY, *Hartford, Speaker of the House, presiding*

10:00 CALL TO ORDER

BUSINESS SESSION

1:00 LUNCHEON FOR OFFICERS, MEMBERS OF THE HOUSE AND GUESTS

2:00 RESUMPTION OF BUSINESS

7:00 ANNUAL DINNER OF THE COUNCIL

Wednesday, April 29

9:00 REGISTRATION—EXHIBIT HALL

AUDITORIUM

9:15 CALL TO ORDER—Walter I. Russell, New Haven, President of the Society
ADDRESS OF WELCOME—President, New Haven County Medical Association

9:45 ORAL HYPOGLYCEMIC AGENTS IN DIABETES MELLITUS
Speaker to be announced

10:30 NEWER VIRUSES AND THEIR CLINICAL IMPORTANCE
Speaker to be announced

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

11:40 MULTIPLE ANTIBIOTICS—USE AND ABUSE
Monroe J. Romansky, *Washington, D. C.*

12:20 CHEMOTHERAPY OF CANCER IN CHILDREN
Sidney Farber, *Boston, Massachusetts*

1:00 LUNCHEON—Cafeteria of the High School
VISIT TO TECHNICAL EXHIBITS

2:00 THE PLACE OF SERUM ENZYME DETERMINATIONS IN DIAGNOSIS AND TREATMENT
John S. LaDue, *New York City*

2:40 THE PROBLEM OF CHRONIC PANCREATITIS
Kenneth W. Warren, *Boston, Massachusetts*

3:30 Meetings of Sections of the Society and Guest Organizations

Section on Dermatology

Section on Gastroenterology

Section on Physical Medicine

Section on Proctology

Section on Urology

Connecticut Allergy Society

Connecticut Association of Medical Record Librarians

Connecticut Chapter of National Association of Social Workers (Medical Social Work Section)

Connecticut Chapter, American Physical Therapy Association.

Connecticut Diabetes Association

Hezekiah Beardsley Pediatric Club

7:00 **Annual Dinner of the Society**
(Location to be announced)

Thursday, April 30

9:00 REGISTRATION—Exhibit Hall

AUDITORIUM

9:15 To Be Announced

9:45 THE USE OF ENZYMES AND ANTI-INFLAMMATORY DRUGS IN SURGICAL DISEASE

Eugene E. Clifton, *New York City*

10:30 MANAGEMENT OF THE PATIENT WITH PERIPHERAL OBLITERATIVE ARTERIAL DISEASE

Robert R. Linton, *Brookline, Massachusetts*

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

11:40 NEW TRENDS IN MANAGEMENT OF DIVERTICULITIS

Alfred S. Frobese, *Philadelphia, Pennsylvania*

12:20 DIAGNOSIS OF VULVAR LESIONS

Mortimer D. Speiser, *New York City*

1:00 LUNCHEON—Cafeteria of the High School

VISIT TO TECHNICAL EXHIBITS

PROGRAM ARRANGED BY THE CONNECTICUT SOCIETY OF
AMERICAN BOARD SURGEONS*President:* Mark A. Hayes, *New Haven**Secretary:* Eugene J. Fitzpatrick, *New Haven**Program Chairman:* Ira S. Goldenberg, *New Haven*

2:00 SYMPOSIUM—UPPER GASTROINTESTINAL HEMORRHAGE

Chairman: Paul D. Rosahn, *New Britain**Panel:* Gilbert W. Heublein, *Hartford*Samuel D. Kushlan, *New Haven*W. W. Lindenmuth, *New Haven*Howard W. Smith, *New Haven*

3:30 MEETINGS OF SECTIONS OF THE SOCIETY AND GUEST ORGANIZATIONS

Section on Anesthesia

Section on Obstetrics and Gynecology

Connecticut Society of American Board Obstetricians and Gynecologists

} Joint Meeting

Section on Orthopedics

Connecticut Society of Pathologists

} Joint Meeting

Section on Radiology

Connecticut District Branch of the American Psychiatric Association

Association of Medical Examiners of Connecticut

Connecticut Occupational Therapy Association

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LENGTH OF ARTICLES: Ordinary articles should not exceed 3,000 words (approximately 3 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

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The Decision To Operate

This issue of the Journal contains a well presented and well illustrated discussion of Dr. Richard T. Shackelford's experiences and thoughts concerning upper gastrointestinal surgery. Although some of his ideas may be controversial, this should not detract from what appears to be a clear-cut and refreshingly readable paper.

One might differ in opinions concerning the use of fluids, electrolytes, and antibiotics pre- or post-operatively. Some might prefer a different approach to the use of nasogastric tube drainage and the use of water by mouth postoperatively. Although there seems to be general agreement that the plastic tube is more comfortable for the patient than the rubber tube, there are beginning to appear reports of erosion and perforation by the harder tip of the plastic tube. The treatment of hiatus hernia remains controversial and I am not convinced that medical therapy is not the treatment of choice for most of the uncomplicated ones; nor am I convinced that left phrenic crush or exeresis is not effective (and much simpler) in selected cases.

These and other points are susceptible to argument, but in no way detract from an effective presentation. In the background however, and often over-riding questions of surgical technique, is the important question of whether or not to operate on a specific patient who has a specific condition. The statistics may help point the way but they cannot take the place of experience and judgment in arriving at a decision and in carrying it through. Peptic ulcer most frequently points up this problem. Most of us are agreed that proven cicatricial pyloric obstruction is an indication for surgery with the type of operation dependent on many factors including the patient's age, his blood pepsin, his acid levels, his condition, and other factors in his history. Perforation is generally considered a surgical emergency though the results of conservative and properly carried out non-operative treatment are impressive.

Repeated hemorrhages from an ulcer in a patient who has maintained a reasonable good regime are also considered a good indication for surgery. However, when one considers the problems involved in post-operative morbidity and hemorrhage recurrence even after apparently adequate operation, some question arises as to a flat-footed dictum in this regard. Intractability as an indication for operation is probably the most difficult problem to assess and there can be no substitute to careful follow-up in such a patient to supplement one's judgment and experience. Very few cases are truly intractable in the sense of relief of symptoms for a variable period of time.

Finally, a word about the gastric ulcer. The surgical thesis that an average surgical mortality of one per cent for benign lesions of the stomach and duodenum versus a 10 per cent incidence of malignancy in apparently benign gastric ulcer clearly indicates surgical intervention for all gastric ulcers is not acceptable in my opinion. If one adds to the one per cent, as Zetzel and others have done so well, the percentage of malignant ulcers which have already metastasized together with morbidity and post-operative problems, one cannot help but feel that a properly supervised trial of medical therapy is the treatment of choice, though one's orientation must be surgical in all gastric ulcers.

S. D. K.

The Decision Not To Operate

The tremendous task of reviewing the very broad topic encompassing advances in upper gastrointestinal surgery is admirably accomplished by Dr. Shackelford in this issue of *The Journal*. Certainly any surgeon of less experience would shrink from such a responsibility; I admire the coordinated, concise and lucid presentation he made before an audience with so varied interests. It is my pleasure to comment briefly on some of the subjects mentioned by Dr. Shackelford.

Many minor issues are controversial: required preoperative level of hemoglobin, the use of the nasogastric tube, fluid and electrolyte replacement, postoperative diet and oral fluids, and early ambulation. Each of these alone may appear to be inconsequential but all considered additively may significantly influence morbidity and mortality. It would not be proper to belabor each at length since I would like to address my editorial comments more directly to a basic philosophy of surgical versus medical management in disease states.

To dispose of patently evident malignant lesions briefly and expeditiously, I assume that there is universal agreement that, save for middle one-third of the esophagus, operative intervention aimed at cure but falling short of the mark with only palliation being possible is the best that can be obtained at the present time.

When reasonable doubt exists as to whether benignancy or malignancy characterizes a lesion, the choice of treatment modalities must not be determined by personal prejudices of the patient's physician but by a very careful evaluation of operative risk (mortality and morbidity) as opposed to the ultimate risk of prolonged expectant treatment. The planned course should be to establish certain criteria which must unequivocally be met within a predetermined period of time satisfying a most

likely benign diagnosis, so that chance of malignancy is truly less than operative mortality.

When the specific problems relating to operative treatment of duodenal ulcer are considered, a guiding principle could be that "operation be considered only for the complications of the disease: perforation, hemorrhage, obstruction, and intractability." Specific indications for operative intervention must exist even with these complications:

Perforation can no longer be considered an unequivocal indication for operation (Taylor), but in our practice, any management short of plication has not been acceptable. Personally, I do not believe there is, at present, any place for resection in the face of acute perforation (Hayes, unpublished).

The bleeding duodenal ulcer remains primarily a non-surgical problem. If one evaluates carefully critical studies by surgeons (Mayo employing the Dunphy-Hoerr classification), it is doubtful that operation adds much to successful management except possibly in controlling the exsanguinating hemorrhage in the older age group. Even an aggressive attack on the problem with broadened indications does not substantiate unquestioned improvement in results (Avery-Jones).

Obstruction appears to be the most clearly defined indication for operation but the onus is on the physician to prove that this is truly organic obstruction due to scarring, since most obstructive situations involve pylorospasm and are reversible by good medical management (Butler).

Intractability remains the most intangible of all the indications and in the presence of the current rising hospital and medical costs, socio-economic factors must influence the final judgment.

To summarize, the indications for the operative treatment of duodenal ulcer must always be measured against a mortality rate of nearly three to five per cent (not accepting only the figures from large experienced clinics); against a significant morbidity in that every other operated patient will fail to regain his preoperative weight, one in 10 will be symptomatic from "dumping," one in 30 will be incapacitated from severe "dumping," and that one in 10 will have a recurrent ulcer problem.

M. A. H.

Harping On The Same Old String

Some psychologists have claimed that, in order to impress a fact upon the average mind by exhortation, repetition for at least eight or nine times is necessary. The medical profession is presumably composed of individuals with more than average intelligence for medical students are carefully sifted before admission and the medical course is long and

difficult. It is nonetheless true that all doctors do not possess that uncommon attribute called common sense and this explains the fact that some doctors who did not rank high as students but who did possess good judgment are much more successful than many of their more intellectually brilliant colleagues.

One of the phenomena of the present century has been the tremendous increase in the number of technical tests accompanied by a tendency on the part of many practitioners to use too many of them in the investigation of their patients' ailments. This unnecessarily increases the cost of medical care in pay patients and of hospital expense in free patients. There is good evidence that for at least 20 years there has been a tendency to neglect the basic essentials of diagnosis, which will always be a good history and a thorough physical and mental appraisal, and to substitute a plethora of technical procedures which after all usually offer no more than substantiating evidence and which, like the physical and mental findings, must be interpreted by human beings with their great variation in powers of observation and of judgment.

Those who are interested in the details of this general subject should read the article of Perrin H. Long* which reflects the conclusions of himself and his colleagues in internal medicine and which goes into considerable detail as to the indications for and the use of laboratory tests in diagnosis and prognosis. One cannot but feel that the situation is, at least in part, due to erroneous teaching or, what is more influential, fallacious example. As Francis Peabody once wrote, "a scientist is known not by his technical processes but by his intellectual processes."

G. B.

*Professors Look at Laboratory Tests. *New York Jour. Med.* Aug. 15, 1954.

The Difficulty Of Keeping Up To Date On The Progress Of Medicine

"The greatest part of a writer's time is spent in reading, in order to write."

Samuel Johnson.

Even in the eighteenth century when Dr. Johnson flourished, a perusal of the publications of authorities of the past was necessary, in writing a worthwhile book or article on any technical subject. In the present century the expansion of medical literature and of that of the underlying sciences has been so stupendous that probably many scientists and practitioners of the healing art do not realize its magnitude.

A writer may look up his own references or have it done for him by a competent librarian or secretary and to accomplish this he must rely on special publications such as the Current Index of Medical Literature of the Armed Forces Medical Library or the Quarterly Cumulative Medical Index of the American Medical Association. The former publication indexes the contents of some 1,600 journals with medical bearing and the latter over 1,000. This gives some idea of the mass of material to be covered which, as those interested in new specialties or subspecialties initiate new publications, tends to increase rather than diminish.

Many writers depend to some extent on summaries of articles, some of which appear in journals, the *Journal of the American Medical Association*, for example, and some of which are published in special journals devoted to summaries, usually prepared by specialists as one means of enabling the general practitioner to keep up to date on the latest advance in medicine.

The inadequacy of present methods has recently been pointed out by Bentley Glass.* While this report refers particularly to the abstracting of biological literature, the criticisms therein embodied are just as applicable to other branches of science with medical bearing and to summaries of clinical subjects. Based on a study of the performance of "Biological Abstracts," a committee headed by Professor Glass shows that there are about 22,000 current biological and partly biological research and review journals of whose contents the "Abstracts" covers approximately 10 per cent. From some journals nearly 100 per cent of the articles are summarized while from others only 30 per cent are covered. The abstracts do not appear until from two-thirds to nine-tenths of a year after the original articles, in fact in the case of some foreign language journals the lapse may be as much as 18 months. The record of other abstracting journals, *Excerpta Medica* for example, is no better than that of Biological Abstracts.

Doctor Glass emphasizes the necessity for: (1) improvement in the coverage of selected journals, (2) acceleration in promptness of publication in abstracting journals and indexing publications, and (3) improved coöperation and coördination among different abstracting services. The subject is a very important one, for no one can adequately assess the progress of the present without a comprehensive knowledge of past accomplishment.

G. B.

*Glass, Bentley, Survey of Biological Abstracting, *Science*, 1955, 121, 583.

The Problems Of Obesity

Let me have men about me that are fat, sleek-headed men and such as sleep o' nights.

Shakespeare's *Julius Caesar*

While the writer feels dubious as to obesity being one of the major medical problems of today, there is substantial evidence that it is increasing and plays a part in the morbidity of so-called degenerative diseases. It is impossible to define normal weight for too many factors enter into personal poundage: heredity, the size of individual bony and muscular structure, eating habits and psychological factors. Insurance companies set up weight averages rather than normals and some writers suggest weight at age 30 as a rough index of the individual adult norm. In a series of observations Mayer, Brobeck and Hamburger* consider the various aspects of the problem. Dr. Jean Mayer writes on the correlation between metabolism and feeding behavior and the multiple etiology of obesity. In man genetic factors may be responsible in congenital adiposities, in so-called Lawrence-Moon-Biedl syndrome, in hyperostosis frontalis interna, in von Gierke's disease, and in familial hypoglycemia. There is a group of patients whose obesity depends on injury or pathological changes in the hypothalamus. Adiposity may accompany cortical brain lesions, especially bilateral frontal ones, or may occur after frontal lobotomy. A variety of endocrine disorders may lead to obesity such as insulin-producing adenomata of the islets of Langerhans, chromophobe pituitary adenomata, Cushing's syndrome, treatment with cortisone, and disorders of the reproductive endocrine system. Dr. Brobeck goes into greater detail concerning the neural aspects of obesity and stresses the fact that, while adequate methods of research are available, much still remains to be learned. Dr. Hamburger emphasizes the psychological factors in the obese and calls attention to the great importance of complete confidence and trust between the physician and the patient and the necessity of return visits in order to discern underlying psychological factors of which the patient may be unaware, in order to adequately treat such cases. It is obvious from this rather sketchy summary that the problem is an exceedingly complex one and requires careful study of many obese patients to arrive at a satisfactory basis for treatment.

G. B.

*Bull. New York Acad. of Med., 1957, 33, 11, 744-782.

Simplified Claim Forms

One of the annoying accompaniments of third party interest in medicine has been, for doctors, the filling out of the information forms for the third party.

There is, of course, no expectation that these forms can ever be done away with entirely but it should be a source of relief for all doctors to learn through the recent publication of the Health Insurance Council, which was recently mailed to all doctors in the State, that uniform and simplified forms have been agreed upon by many insurance companies, for health and accident coverage.

Happy as we are with developments of this type we are frequently unaware of the vast amount of time and effort on the part of our State Society Committees which have produced these results.

In this instance, the Third Party Payments Committee of the State Society has played an important part in the development of uniform forms and should be encouraged to continue their efforts to lighten the ancillary burdens of medical practice.

D. S. O'C.

Criteria For Hypertension Therapy Outlined By Panel In Philadelphia

Criteria for an effective therapeutic program for patients with hypertension were agreed upon generally by 15 leading investigators at a panel conducted at the conclusion of a five day Symposium on Hypertension in Philadelphia. The symposium was sponsored by Hahnemann Medical College and Hospital under the chairmanship of Dr. John H. Moyer, Professor of Medicine at Hahnemann.

Treatment for essential hypertension—mild, moderate, and severe—and surgical indications were outlined in detail.

Among the points agreed upon by the investigators and their moderator, Dr. Moyer, were:

1. A blood pressure of 150/100 or above warranted therapy. Dr. Edward Freis, Chief of the Cardiovascular Research Laboratory, Georgetown University Hospital, felt that the most valid blood pressures were those taken at home by the patient or his family. Dr. A. C. Corcoran, Cleveland Clinic Foundation, and Dr. Edward Meilman, Clinical Associate Professor of Medicine, State University of New York Downstate Medical Center, concurred.

However, the majority of the panel depended on the blood pressures taken in the clinic or the physician's office. Some of the investigators felt that diastolic blood pressure even as low as 90 to 95 should be treated.

2. There was general agreement that patients who later developed severe hypertension came from the group of patients with mild intermittent hypertension. A more active therapeutic program, and the use of more potent drugs, should be instigated when the diastolic pressure is higher and more abnormal changes exist in the kidneys and the heart.

3. The following factors should be taken into consideration for active treatment when home blood pressure is between 90 and 100: a history of hypertension in the family, especially if found on both sides of the family; age below 45 in men and under 35 in women; and race (Negro patients especially need treatment).

4. Treatment of mild and moderate hypertension: chlorothiazide, 500 mg. twice daily. If B. P. is not controlled after one week add reserpine 0.25 mg. or alseroxylon 2 mg. twice daily for one week, then once daily. Next week add hydralazine 25 mg. three times daily in sequential fashion, 25 mg. once daily first two days, 25 mg. twice daily next two days, and then three times daily. If necessary raise hydralazine dosage to 50 mg. three times daily. Do not exceed 150 mg. per day.

WITHDRAWING RAUWOLFIA

If B. P. is not lowered continue dosages with home B. P. checks twice daily for two weeks unless this has already been done. If home or office B. P.s are well stabilized withdraw Rauwolfia after one month. Restore drug only if home B. P. rises.

If B. P. is not lowered, discontinue hydralazine but continue chlorothiazide and Rauwolfia, and (1) add ganglionic blocking drug as follows: pentolinium tartrate, 20 mg. after breakfast, at 2 P.M., and at bedtime; or chlorisondamine, 10 to 20 mg. as above, or mecamlamine 1.25 mg. as above; (2) using home pressures as a guide, raise dosage by following increments: 20 mg. pentolinium or 10 mg. chlorisondamine or 1.25 mg. mecamlamine every two to three days until B. P. falls.

After three months of adequate B. P. control (average reduction of 20 per cent or more of mean pretreatment blood pressure), try withdrawing Rauwolfia. After six months try withdrawing blocking agent.

5. Treatment of severe hypertension: Hospitalize and record B. P. four times daily. If diastolic is above 140 mm. Hg give two to four mg. reserpine intramuscularly every four to 12 hours, depending on need. If BUN is below 70 mg. per cent but above normal, add chlorothiazide 500 mg. twice daily and hydralazine 25 mg. three times daily, elevating dosage to 50 mg. after 48 hours.

If diastolic B. P. falls to 120 or less follow BUN and lighten treatment if BUN is rising. If BUN stabilizes below 70 mg. per cent add ganglion blocker, raising dosage daily with recording of B. P. in supine, dangling, and standing positions. Repeat BUN every 48 hours. Aim for gradual reduction of B. P. When achieved, substitute oral for parenteral reserpine and in lower dosages (0.25 mg. once or twice daily) for maintenance.

If BUN is in normal range begin chlorothiazide, hydralazine, and blocking drug simultaneously but

proceed cautiously with frequent checks of BUN after diastolic falls to 120 mm. Hg or less. If diastolic is below 140 mm. Hg, begin with oral rather than parenteral reserpine but otherwise proceed as outlined above.

6. Surgery indications: In patients who do not respond well to medical therapy, either because of severe side effects or because they are unable to carry out the medication regimen, surgery is indicated since it makes them so much more responsive to drugs following surgery. After sympathectomy, smaller doses of less potent drugs can be used to materially reduce the side effects.

Besides Drs. Moyer, Freis, Corcoran, and Meilman, other panelists were Drs. William Daeschner, Baylor University; Frank A. Finnerty, Jr., Georgetown University; Ralph Ford, Baylor; Ray Gifford, Mayo Foundation; Arthur Grollman, University of Texas Southwestern Medical School; William Hollander, Boston University School of Medicine; John M. Howard, Hahnemann; Marvin Moser, Montefiore Hospital, New York; William Paton, Royal College of Surgeons, London; H. Mitchell Perry, Washington University School of Medicine; and Reginald Smithwick, Boston University College of Medicine. (*Reprinted from Scope Weekly courtesy of Upjohn*).

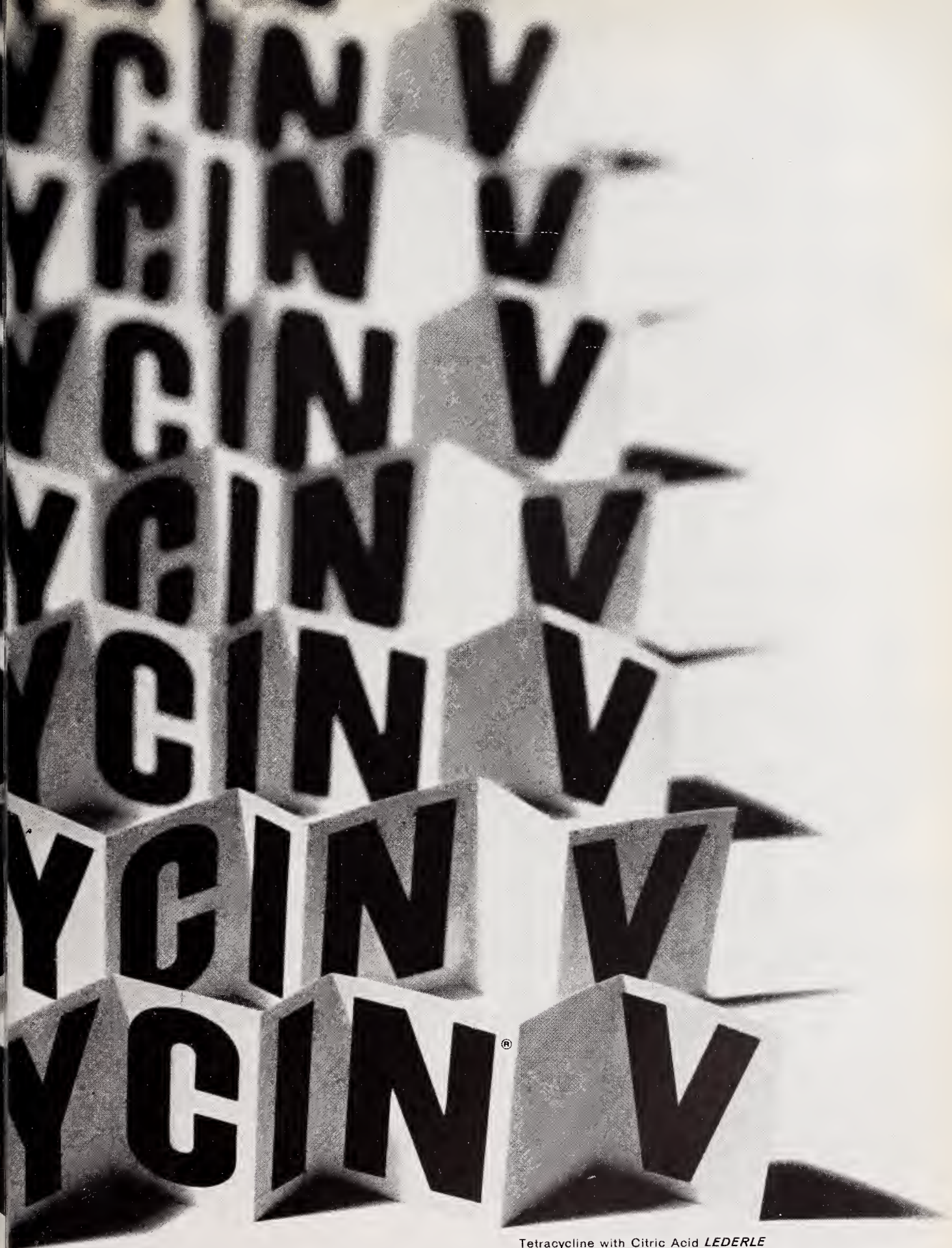
Physical Medicine And Rehabilitation

"Physical medicine . . . is that branch of medicine which is characterized by the use of physical force and energy to diagnose and treat disease." The media of physical medicine include mechanical, electrical, thermal, and water forms of power and energy. Among the uses of these forms are the mechanical stretching of contracted tendons, short-wave diathermy, ultraviolet rays to help tissue growth, and hydro massage to exercise partly paralyzed muscles.

Broader in scope, rehabilitation may be defined as "the process whereby the person, disabled or handicapped by illness or accident, is restored to as nearly normal functioning as possible," employing the skills of several disciplines, one of which is physical medicine. Psychology, vocational training, social casework, nursing, psychiatry, cardiology, orthopedics, surgery, and internal medicine are additional areas of knowledge utilized in rehabilitation.

Physical medicine is a specific medical discipline requiring specific training. Rehabilitation is the work of a "team" directed to individuals; thus goals in rehabilitation must vary because of variations of conditions and capacities of the individual patients. (*Cincinnati J. Med.* 39:525, November, 1958.)





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CLINICAL MEDICINE

A SEMINAR ON CARDIOVASCULAR DISEASE

DECEMBER 3, 1958

AN ADDRESS BEFORE THE NEW HAVEN MEDICAL ASSOCIATION

NOVEMBER 5, 1958

Dr. Charles K. Friedberg:

Abstract of paper delivered before the Bridgeport Heart Association on December 3, 1958:

The treatment of intractable heart failure was reviewed by Charles K. Friedberg, Cardiologist, Mt. Sinai Hospital, New York. The speaker emphasized that a complete review should be made in any situation where intractable heart failure is believed to exist. Occasionally, the diagnosis may be incorrect and the symptoms may be due to chronic pulmonary disease, carcinomatosis or cirrhosis. Sometimes a non-cardiac disease may be a contributory cause of symptoms. Most commonly, Dr. Friedberg found this to be pulmonary embolism. Anticoagulant therapy has not solved this problem and he still finds it necessary occasionally to advise ligation of the veins in the lower extremities or even the inferior vena cava. Chronic broncho-pulmonary infection may be present and proper treatment of this may result in gratifying improvement.

The speaker emphasized the importance of remediable heart disease. Operation for mitral stenosis, congenital defects or constrictive pericarditis may result in gratifying improvement. When appraising the treatment of congestive heart failure, Dr. Friedberg emphasized the need for meticulous attention to each detail. Patients often do not get enough bedrest and rarely practice adequate restriction of sodium intake. Lately, Dr. Friedberg has found over-digitalization a more common problem than inadequate doses of digitalis. This he attributes to use of fixed dosage schedules often provided by manufacturers. In his experience, chlorothiazid approaches the ideal diuretic. He has found that doses of one gram or less daily give best results.

Dr. Samuel A. Levine:

A seminar on cardiovascular disease was presented by the Bridgeport Heart Association on December 3, 1958, at the Bridgeport Hospital.

Dr. Samuel A. Levine, Clinical Professor of Medicine, Harvard Medical School was the first speaker. He spoke informally on certain aspects of coronary heart disease, which have had special interest for

him. He emphasized that angina pectoris, the most common manifestation of this type of heart disease, can generally be diagnosed in just a few moments by a history alone. Since no examination or laboratory test can disprove the diagnosis, the physician is compelled to make the diagnosis if the history is typical unless the patient is known to be a malingerer, and wishes to mislead the doctor. Angina pectoris is a physiological state and almost always is due to diseased coronary arteries, although it may occur occasionally in valvular heart disease, severe anemia or thyrotoxicosis without significant coronary disease. Such patients may die instantly at any time. Since the patient may use a variety of terms to describe the sensation he has experienced, or may even be unable to put his sensation into words, Dr. Levine emphasized the importance of close attention to the history.

The source of anginal pain is unknown, in spite of all the research done on this point. Dr. Levine has been impressed at times with the improvement of angina following the onset of congestive heart failure and also with the prompt relief of pain on slowing the heart by brief pressure on the carotid arteries. He suggests that this maneuver helps to differentiate anginal pain from non-cardiac pain.

The hereditary factor in angina was emphasized. The speaker felt that this is an important area for future research.

Dr. Louis Weinstein:

Dr. Louis Weinstein, Professor of Medicine, Tufts University Medical School, discussed some aspects of subacute bacterial endocarditis.

The change in prognosis of this disease since the development of chemotherapy has placed increasing responsibility on the doctor to make the diagnosis earlier, to institute proper therapy and to follow each case more closely. Dr. Weinstein reemphasized that subacute bacterial endocarditis occurs rarely in patients with auricular fibrillation or long standing congestive failure, patients with mitral stenosis or syphilitic heart disease or recent active rheumatic infection. On the other hand it is

more common in people with mitral insufficiency and aortic insufficiency, in men, and in older people.

The question of host factors in the disease has been under increasing study since it was recognized that some apparently susceptible organisms were not controlled. He mentioned experimental studies indicating that the levels of penicillin and other drugs in blood clots lagged behind the blood levels. Sometimes the in vitro sensitivity of an organism to an antibiotic bore little or no relation to the in vivo sensitivity. Since penicillin is most effective against bacteria in the logarithmic phase of growth and is less effective at other times, he suggested that doses every six hours might be more effective than continuous administration.

Recently, the group D streptococcus (enterococcus) has been quite commonly encountered, particularly in older people. This organism now accounts for one-third or more, of the cases of subacute bacterial endocarditis. Dr. Weinstein suggested that a combination of penicillin and streptomycin be used as the initial drug while awaiting the results of blood cultures and sensitivity studies rather than penicillin alone. Sensitivity studies should be done by the more precise test tube dilution methods, rather than by paper disc techniques. In view of the gravity of the condition, Dr. Weinstein felt strongly that bacteriocidal drugs such as penicillin or erythromycin be used when possible rather than bacteriostatic agents. He is still of the opinion that four weeks of treatment with maximal doses is indicated. The course of treatment should be followed closely with routine blood cultures and every effort should be made to attain prompt sterilization of the blood.

Dr. Barnett Greenhouse:

This is an abstract of an address delivered by Dr. Alexander Marble of Boston before the New Haven Medical Association on November 5, 1958, during his official visit to the Connecticut Diabetes Association and inaugurating Diabetes Week in Con-

necticut. Dr. Marble invited the active interest of every physician in the year-round search for the undetected diabetic.

To avoid neglect of a questionable case of diabetes, the casual finding of glycosuria should not be dismissed as being of little or no significance until proven. The fasting blood sugar in the mild and early cases can be misleading because it may be found normal. However, a blood sugar following a liberal carbohydrate meal is more informative, and in doubtful cases, one can resort to a glucose tolerance test.

The blood sugar "is not an idol to be worshipped", but is useful to show the trend in diabetic management and control.

Dr. Marble championed the planned diabetic diet and opposed the "free diet". Weighing the diet, at first, will acquaint the patient with his food portions. The diabetic diet need not be overly restricted. The carbohydrate content is approximately half of the normal diet, 150-200 Gms.; the protein and fat allowance being 60-100 Gms. each with a total calorie intake of 1500-2500.

The controversy over the type of fat in the diet remains undecided. However, if there is a choice, one should use unsaturated, rather than saturated fats.

In addition to lente insulin, whose action is similar to that of NPH insulin, there is now available also semi-lente insulin, a shorter acting insulin, and ultra-lente insulin which has a very prolonged action. Ultra-lente insulin is useful where NPH insulin does not carry 24 hours and is preferable to protamine zinc insulin because crystalline insulin may be added in the same syringe and remain free to give the desired initial quick effect.

The oral agents are useful particularly in the older patients. The present lack of knowledge as to their effect on prolonged use makes for caution in their employment in young persons. However, very few toxic effects are being observed currently, except for hypersensitivity in occasional patients.



THE PRESIDENT'S PAGE

Reminiscences Dating Back Fifty Years

AFTER graduation from Yale Medical School in 1909 and receiving "First Appointment" for internship at New Haven Hospital and serving eighteen months on a rotating service, I started practice in 1910. Dr. George Blumer, for whom I always had the greatest admiration as a teacher and diagnostician, was then dean of the medical school.

There were very few physicians at this time who limited their practice to any one special field. Obstetrical deliveries were carried out at the home and only rarely was a delivery done in a hospital.

Operation for removal of tonsils and adenoids was first done during my internship in 1909. The wire loop was not known, but the Gottstein curette for removal of adenoid tissue was in use. Most tonsils were removed piecemeal.

Lobar pneumonia was the great killer of young and old, with a death rate of 20 per cent of the cases. Empyema was common with pneumonia. The organism causing the disease was known but there was no specific treatment. Many patients were given "open air" treatment even in winter, either by having wide open windows or by being placed outdoors on a porch. Strychnine and caffeine were the drugs used for supportive treatment.

Bronchopneumonia also was recognized, especially in the older people, and was a lethal disease. To quote Dr. William Osler from his *Practice of Medicine* published in 1907: "Pneumonia may well be called the friend of the aged. Taken off by it in an acute, short, not often painful illness, the old man escapes those cold gradations of decay so distressing to himself and to his friends."

Diabetes was a dreaded disease. Diet was the only known treatment and really the victims of this ailment, if in a severe form, just withered away from starvation and eventually died, either from inanition or gangrene with sepsis.

Tuberculosis was common and it was not unusual to first see the patient in an advanced stage of the disease. State institutions were available but there was a long waiting list. It is interesting to note that Gaylord Farm in Wallingford was functioning but was then called the New Haven Anti-Tuberculosis Association. The organization of this association was stimulated by the New Haven County Medical "Society." The members of the medical society, "recognizing the serious impact of this disease upon the health of the citizens they serve," were instrumental in its founding in 1902. This association was headed by that most conscientious and respected gentleman, Dr. David R. Lyman, from 1904 to 1953.

Diphtheria, a lethal disease of the old days and one that many doctors of today have never seen, was prevalent. Diphtheria antitoxin was then being used and it was customary to carry a package of antitoxin in the doctor's bag at all times for emergency use.

Rickets was common, especially in the negro race. Phosphorus and sunshine were advocated, together with rubbing the body with olive oil and the use of splints to the infants' legs, although it was "suggested" that cod liver oil might be advantageous.

Gout was about the only ailment where the treatment resembled that presently used. Colchicine was then used with good results.

Anemia was treated with tincture of ferric chloride, supporting diet, and sunshine. Primary anemia was recognized by the low corpuscular count, and the afflicted person usually died within two years.

Leukemia, Hodgkin's disease, and purpura were recognized. X-ray for therapy was not known. Scurvy was well treated with citrus fruits.

Blood pressure was being taken, not as a routine procedure, but only on patients suspected of having a high blood pressure. The Riva-Roci blood pressure apparatus, available only in the hospital, was used. No physician in private practice took blood pressures.

All of the above citations are characteristic of the practice of medicine in the years 1909-10. What advances have been made over the years! What advances will come in the next 50 years? Time marches on.

Walter I. Russell, M.D.

FROM THE SECRETARY'S OFFICE

WILLIAM R. RICHARDS, M.D., *Executive Secretary*

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Josephine P. Lindquist
Assistant to Executive Secretary

CALL

ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1959 Annual Meeting of the House of Delegates will be held in the auditorium of the Hamden High School, 2040 Dixwell Avenue, Hamden, commencing at 10:00 o'clock in the morning of Tuesday, April 28.

Following luncheon, the House will reconvene for the completion of business.

Walter I. Russell, President

William R. Richards, Secretary

INTRODUCTION OF RESOLUTIONS

Article VII, Section 4, of the By-Laws of the Society provides:

Par. 1. All resolutions to be introduced before the House of Delegates at an annual, semi-annual, or special meeting, except resolutions and recommendations from the Council and resolutions and recommendations that may be contained in committee reports, shall be delivered to the Executive Secretary in time for publication in the official agenda for the meeting at which action is to be taken.

Par. 2. Resolutions and recommendations to be introduced before the House of Delegates at an annual, semi-annual, or special meeting by the Council and recommendations that may be contained in reports of standing or special committees of the Society shall be published in the official agenda for the meeting at which action is to be taken. The official agenda shall be distributed to the members of the House of Delegates at the earliest possible date preceding the meeting.

Par. 3. Resolutions and recommendations which do not meet the requirements of paragraphs 1 and 2 of Section 4 of this article may be accepted for action by a session of the House of Delegates by a majority vote of the delegates present. Such resolution and recommendations shall be referred at once by the presiding officer to reference committees appointed by him from the membership of the House. These reference committees shall consider the resolutions and recommendations referred to them and shall report, with recommendations, to the House before adjournment of the session.

DELEGATES TO ANNUAL MEETING

The By-Laws of the Society provide that each county association is entitled to one delegate in the House of Delegates for each 35 members in the association or fraction thereof based on the membership as of December 31st of each year. According to this, the quota of delegates from each county association who should attend the Annual Meeting of the House of Delegates which will be held in Hamden, April 28th and the Semi-Annual Meeting in December is as follows:

COUNTY	MEMBERSHIP DEC. 31, 1958	OFFICIAL DELEGATES
Fairfield	838	24
Hartford	997	29
Litchfield	133	4
Middlesex	117	4
New Haven	886	26
New London	170	5
Tolland	22	1
Windham	65	2

ELECTION OF COUNCILORS AND
ALTERNATE COUNCILORS

Councilors and Alternate Councilors should be elected for a term of two years at the annual meeting of the county associations this year in Hartford, Middlesex, New London and Windham counties. No Councilor or Alternate Councilor elected by a county association shall serve more than three successive terms of two years each in his respective Office, but after a lapse of one term of two years, such Councilor or Alternate Councilor may be eligible for re-election.

APPOINTMENT TO COMMITTEE ON
PROFESSIONAL RELATIONS

The By-Laws require that the county associations in Hartford, Middlesex, New London and Windham counties at their annual meeting in 1959 elect a past-president of the association to serve for two years on the state Committee on Professional Relations. No member of the Council of the State Medical Society is eligible for election to this committee and no member shall be elected to serve two consecutive terms.

COUNCIL MEETING

Thursday, February 12, 1959—3:30 P.M.

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 3:30 P.M. on Thursday, February 12, 1959. Present in addition to the Chairman were Doctors Russell, Weise, Polito, Richards, O'Connor, Scully, Davis, Gens, Clarke, Kennedy, Buckley, Blodinger, Archambault, Ottenheimer, Eddy, Seigle, Gardner, Rentsch, and Starr. Absent were Doctors Carter, Gallivan, Cullen, Schiavetti, Grendon, Hughes and Gilman.

REPORT OF COMMITTEE TO STUDY OPERATION AND ORGANIZATION OF THE JOURNAL. Louis H. Nahum, Literary Editor of the Journal, presented a report of this committee, including certain recommendations which would necessitate changes in the by-laws. After full discussion, it was VOTED to table action on this report and its recommendations.

EXEMPTIONS FROM PAYMENT OF DUES. It was VOTED to exempt five members from dues as follows:

- (a) William P. Teuscher, Fairfield County, starting 1958 for physical disability.
- (b) J. Colman Kelly, Fairfield County, starting 1958 for physical disability.
- (c) Creighton Barker, New Haven County, permanent exemption starting 1959.
- (d) Henry Dixon, New London County, 1958 dues, for physical disability.
- (e) Frederick L. Dey, New London County, for period of postgraduate education.

LEGISLATIVE BILLS IN 1959 GENERAL ASSEMBLY. The following bills were considered by the Council with the action taken indicated in each case:

SB 593, SB 126, H.B. 2025—All are concerned with the establishment of a new medical school in Connecticut. It was VOTED to submit to the Chairman of the appropriate legislative committees, the recommendations of the Hastings Report of 1955, amended as follows:

1. The Council of the Connecticut State Medical Society favors the establishment of a new medical school in Connecticut.

2. The Council directs the Legislative Committee and others it may designate to provide support for such a project.

3. The Connecticut State Medical Society offers its services and abilities in aiding the state in setting up this school.

4. The Council suggests that an advisory committee from the Society to the school be established as part of the permanent pattern of its operation.

SB 268—To give the osteopathic physician, licensed to practice medicine or surgery, the same privileges to establish medical group clinic corporations, as is now granted to the practitioners of medicine and surgery. It was VOTED not to oppose this bill.

SB 274—"Creating statutory authority to set up equal fee schedules for medical and osteopathic specialists, serving needy persons chargeable to the State of Connecticut." It was VOTED to oppose this bill on the grounds that certification of doctors of osteopathy as specialists is not equivalent to such certification by American Colleges and Boards of doctors of medicine.

SB 453, SB 942—These bills concern themselves with the purpose of requiring that hospital service corporations' and medical service corporations' Boards of Directors include representatives of "consumers" and of "organized labor". It was VOTED to oppose these bills on the grounds of phrasing; that the Connecticut State Medical Society favors consumer representation and labor representation on these Boards of Directors but not "representatives of organized labor" as a bloc.

HB 2069—Concerned with "investigations of Blue Cross and Blue Shield". It was VOTED to oppose this bill on the grounds that existing agencies of the government of the State of Connecticut adequately supervise the operation of these corporations.

HB 2105—An Act concerning removal of the members of the Board of Trustees of Griffin Hospital. It was VOTED to oppose this bill on the basis of its general and unsubstantiated charges and implications.

HB 2106—"To make available operation rooms in all non-profit hospitals to all licensed members of the medical profession and to make available to the patients of the hospital the doctor of their choice." It was VOTED to oppose this bill on the grounds that it would be against the public interest and would move existing and proper safeguards provided by hospitals against incompetent surgical treatment.

HB 2527—"To legalize euthanasia to allow those afflicted with severe physical suffering to have their lives terminated by painless means under the sanction of law." It was VOTED to oppose this bill on principle.

HB 3103—"To establish a state medical board to pass on qualifications of all physicians and surgeons." It was VOTED to oppose this bill on the grounds that existing boards of examiners are fully competent to pass on the qualifications of physicians for licensure and limitations of practice.

SB 307—"To clarify the definition of chiropractic". It was VOTED to oppose this bill on the grounds that "physical therapy" should not be practiced in any form by those who have had no formal training or education in its use. It was further VOTED to endorse the representation made by John Gallivan of Hartford at a hearing on this bill held on February 10, 1959, expressing this attitude, among others.

HB 3774—"To provide for representatives of the fields of general medicine, surgery, obstetrics and pediatrics on the Connecticut Medical Examining Board." It was VOTED to support this bill in principle.

Several other matters pertaining to legislative bills were considered but no action was taken on them.

OTHER ACTIONS. The Council received a communication from Alfred Burgdorf, Hartford, outlining a workable plan for legislative action by the Society. Each member of the Council was urged to implement the suggestions contained therein.

Dr. Gens reported that John Murray, Greenwich, Chairman of the Committee on State Legislation, had resigned to his county association (by cable) as representative to this committee from Fairfield County. It was VOTED that Clifford Mills, Norwalk, be appointed a pro-tem member of the Committee on State Legislation and its acting Chairman. Dr. Mills will be Fairfield County's nominee for this post at its annual meeting. It was further VOTED that Dr. Mills be empowered to appoint sub-committees as he sees fit to strengthen legislative action by the Society.

REPORT OF COMMITTEE TO STUDY DESIRABILITY OF EMPLOYMENT OF FULL-TIME EXECUTIVE SECRETARY.

After full discussion, it is the decision of the Committee to recommend to the Council:

1. That the office of executive secretary remain as it is presently described in our by-laws and that a nomination for the office be presented to the House of Delegates at its annual meeting in April, 1959.

2. As presently written in Article VI—Section II, Paragraph 4: The Executive Secretary is authorized "to employ such assistance as may be approved by the Council." The committee recommends that the Council employ a General Manager (Executive-Vice President) through this provision of the by-laws, on a contractual basis and at a salary decided upon by the Council to carry out the following duties for the Connecticut State Medical Society:

(a) The supervision and management of the State Medical Society office under the direction of the Council of the State Medical Society.

(b) All employees of the State Office shall be supervised by the General Manager (Executive-Vice President).

(c) The General Manager (Executive Vice-President) without vote shall be the secretary at each meeting of the Council.

(d) The Speaker of the House of Delegates with the cooperation of the General Manager (Executive-Vice President) shall arrange for the proper organization of meetings of the House of Delegates.

(e) The General Manager (Executive Vice-President) shall attend or be represented at all meetings of committees of the Society and shall inform the Council of the discussions, actions and recommendations of aforementioned committees.

(f) The Committee recommends that the General Manager (Executive Vice-President) preferably be a physician.

(g) The Committee recommends that the Council at its earliest opportunity appoint a committee, similar in purpose to the Heller group who advised the AMA for the more efficient operation of its business and which is mainly characterized by the grouping of committees of related interests under Councils.

(h) The Committee recommends that, because of the over-all importance of these matters, the Council take no immediate action to implement these recommendations but that, if they are adopted by the Council, they be submitted to the House of Delegates at its next meeting.

Following presentation of this report, Dr. Feeney stated very forcefully that, despite the generally satisfactory performance of the incumbent, part-time Executive Secretary, he felt many important matters of Society business were being neglected and that a full-time director was urgently needed and should be obtained without delay. Dr. Richards

described the several problems encountered in attempting to carry out the duties of secretary and simultaneously carry on a private practice. He called the Council's attention to a written set of recommendations which Dr. Gallivan had recently submitted to the other members of the committee and desired to be read in conjunction with the committee's report. Dr. Richards then excused himself from the meeting.

In the Secretary's absence, Dr. Feeney read Dr. Gallivan's recommendations which generally coincided with the report but, in addition, encompassed a number of by-law changes and reorganization plans for the Society along the lines being followed by the AMA.

After a full discussion of the matter, the Council VOTED unanimously to authorize the same committee to acquire the services of William R. Richards, New Haven, as "General Manager" of the Society on a full-time basis, immediately and under a mutually agreeable contract.

The Secretary then rejoined the meeting and was informed of this action. He expressed his thanks for the confidence shown in him by the Council and stated he would be pleased to meet with the committee for the stated purpose.

It was then VOTED to receive the report of the committee but to refer its recommendations to the Sub-committee to Study and Revise By-laws.

RECOMMENDATIONS FROM COMMITTEE ON PUBLIC HEALTH. It was VOTED to table action on a proposal that the Society attempt to obtain funds from the legislature to provide a salary for the establishment of the position of Deputy Chief of the Medical Service Division at the Headquarters of Civil Defense.

It was VOTED to approve the following proposals.

(a) that a pediatrician should be on the Editorial Board of the Journal

(b) that (1) each physician should assume the responsibility for making certain whenever possible that all members of families he serves receive protection against poliomyelitis by having the full three doses of polio vaccine;

that (2) state medical organizations arrange with state health departments for a joint effort to bring together county medical society representatives and representatives of county and city health departments for the purpose of discussing the need for joint study committees at the local level to survey the problems which may exist and to work jointly to solve them;

that (3) county medical societies meet with county and local health department representatives to create study committees to survey the problem of

immunization as it may exist in the local area and develop and implement a satisfactory program to meet the local situation.

that (4) they authorize the Committee on Public Health to contact each county association in order to implement these recommendations so that a higher percentage of persons will be immunized against poliomyelitis before the next epidemic season.

(c) that the Chairman of the Committee on Public Health advise the Council of the State Medical Society that they have been advised that there are no funds available to purchase polio vaccine—"for the free use of the people of the state upon whom the purchase would constitute a financial hardship and urge them to request the State Commissioner of Health to take the necessary steps to obtain such funds so that there will be no interruption of the poliomyelitis immunization program.

A communication from the Committee on Public Health regarding full-time health officers in areas of the state was read for information.

REPORT FROM REGINALD C. EDSON, CHAIRMAN, COMMITTEE ON CASUALTY PLANNING. This report had been distributed with the agenda. In brief, it outlined the setup for meeting the medical problems of State Civil Defense as outlined by Stanley Osborne, Commissioner of Health, and requested support (as in the previous Committee on Public Health proposal, item 6) for obtaining funds from the legislature for a full-time civil defense physician and office staff.

It was VOTED to accept the report for information but to take no action on its recommendations at this time.

REPORT OF NOMINATING COMMITTEE. Dr. Feeney reported that nominations for 1959 were not yet completed.

ENDORSEMENT OF REAPPOINTMENT OF STANLEY H. OSBORN AS COMMISSIONER OF HEALTH. It was VOTED unanimously that the Council endorses Dr. Osborn to continue to serve as Commissioner of Health and to recommend him to the Governor for reappointment.

REPORT FROM CHAIRMAN OF COMMITTEE ON MEDICAL CARE OF VETERANS RE: SOCIALIZED MEDICINE. It was VOTED to accept with commendation the report of Dr. George A. Buckhout, Chairman of the Committee on Medical Care of Veterans. CONNECTICUT MEDICINE will be requested to publish this report in an early issue.

COMMITTEE RESIGNATIONS OF HARRY C. KNIGHT, MIDDLETOWN. It was VOTED to accept with regret the resignation of Dr. Knight as a member of the

Committee on Public Relations and to inform the Nominating Committee of this vacancy; and to accept his resignation as Chairman of the Committee on Health Careers. On Dr. Knight's recommendation, it was VOTED to appoint Bernard F. Mann, Jr., New Haven, as Chairman of the Committee on Health Careers.

REPORT OF CONFERENCE WITH MEDICAL DIRECTOR, DEPARTMENT OF WELFARE. The Secretary informed the Council of the intention of Dr. John P. Bachman, Medical Director, Department of Welfare, to issue special prescription blanks to all doctors for welfare patients in order to prevent certain abuses now existent.

GUIDING PRINCIPLES RELATING TO THE PRACTICE OF OCCUPATIONAL MEDICINE. A document bearing this title had been submitted to the Council for consideration by John F. Kilgus, Chairman of the Committee on Industrial Health. This was represented as a revision of the original "Code of Ethics Relating to Occupational Medicine" adopted by the Council and House of Delegates in 1953. It was stated that the revisions were approved by 18 members of the committee.

A letter from Dr. Gallivan was read, suggesting that action on this document be deferred until the counties and House of Delegates had expressed the Society's stand on "free choice of physician." In this respect, the Connecticut "Guiding Principles" were at variance with the AMA document entitled "Scope, Objectives and Functions of Occupational Health Programs."

After considerable discussion, it was VOTED to approve the revisions contained in "Guiding Principles Relating to the Practice of Occupational Medicine" and to approve the document in its entirety.

CONNECTICUT MEDICAL SERVICE. Dr. Feeney reported that at a joint meeting of the sub-committees of Connecticut Medical Service and the Connecticut State Medical Society held on January 22, 1959, the Council's sub-committee had been asked to agree to the nomination of the nine members of the Medical Advisory Board of CMS to be appointed jointly by the sub-committees. This slate of candidates had been prepared by the CMS side, had received no prior consideration by the Council, and was found to contain a number of nominees unacceptable to the Society. It was therefore agreed to postpone action in this matter and to contact the sections of the Society and other groups in order to come up with a more representative and acceptable list from which to select the nominees. The next meeting was scheduled for Friday, February 13, 1959.

The Council VOTED to endorse the recommended nominees of the sub-committee as follows, with the understanding that these nominations were still to be made jointly with the CMS sub-committee on February 13, 1959 and that there might be exceptions to this slate:

Oral Surgery: Philip Sheridan, Hartford; Dermatology: Cleveland R. Denton, Hartford; Ophthalmology: Louis D. Harris, Hartford; Radiology: Arnold H. Janzen, Hartford; Obstetrics-Gynecology: Louis C. Backus, Waterbury; Internal Medicine: Frederick A. Beardsley, Jr., Willimantic; General Practice: Rudolph A. Damani, Waterbury or Michael DeVito, Hartford; Member of the Board: Frank L. Polito, Torrington.

* In considering the foregoing matter, several members of the Council stated that they and many of their constituents were not clear as to the exact authority of the negotiating sub-committee in relationship to such matters as determining the CMS by-laws, the nomination of members to the CMS Medical Advisory Board (formerly the Professional Policy Committee) etc. Dr. Feeney and other members of the sub-committee explained that the function of this group is entirely advisory; that there has been no voting on any matter under joint discussion; that except for certain assurances given by the Council itself to the National Blue Shield people last summer, there have been no agreements or commitments made on behalf of the Council or the Society: and that beyond negotiating for what seem to be sound policies in regard to professional relations, designed to protect the interests of all the doctors in the state, the sub-committee has no authority to accept or reject any proposal on any matter which might be brought up for discussion by the CMS Board through its Executive Committee.

In the matter of certain payments for chiropodists' services by CMS, for example, it was pointed out that the Society's sub-committee had recommended against such payments but recognized that this was a decision which could be made only by the CMS Board. In the matter of by-law changes, as another example, the sub-committee has advised as to what changes might provide for better representation of doctors in the plan and thereby restore the confidence of members of the Society in the program. However, the adoption of these changes must be voted by the CMS Board, not the Council or the House of Delegates of the Connecticut State Medical Society. In the matter of changes in existing policies or the development of any new policy the sub-committee's only function is advisory and it has yet to exercise this function. When and if such contracts come into existence, the county associations and the House of Delegates, are, and will

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Connecticut Medicine
March, 1959



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be, the only agencies authorized to accept or reject them and each individual physician will decide for himself whether he will participate in such contracts under the terms set down.

RESOLUTION FROM COMMITTEE ON PUBLIC HEALTH. A resolution was received from the Committee on Public Health having to do with furthering the program for improvement of the health of children and youth in Connecticut as proposed by the Health Committee of the Governor's Committee on Children and Youth for the 1960 White House Conference. There was some objection to one of the items referred to and it was VOTED to return the resolution to the Committee on Public Health for clarification.

DATE OF NEXT MEETING. It was VOTED to hold the next meeting on Wednesday, March 18, 1959.

Meeting Held in March

- 3 Sub-committee on Staphylococcal Infections of Committee on Public Health.
- 4 Sub-committee on Nutrition of Committee on Public Health.
- 5 Committee on Connecticut Health Careers.
- 12 Committee on Public Health.
- 18 Council.

FDA Publishes List Of Approved Food Additives

The Federal Register carries a long list of chemicals and other additives approved by the Food and Drug Administration, along with proposed regulations governing the new food additives law passed by the last Congress. FDA also has cleared a new microbial pesticide, bacillus thuringiensis Berliner, for use against crop insect pests. It will be applied as a dust or spray. Before clearing the pesticide, FDA required the manufacturer to produce scientific testing data showing that the substance would not be a hazard to health. It was demonstrated that the pesticide's microorganisms are not pathogenic to warm-blooded animals, and human volunteers ate and inhaled it without ill effects. FDA points out that in the past milky disease bacteria have been widely used for control of Japanese beetle, but that they have been applied only to the soil, and not directly to crops.

In making the announcement, Commissioner George Larrick of FDA said: "The development of new safe pesticides to protect our food supply contributes to progress both in agriculture and in public health. . . ."



V. J. SKUTT, President, Mutual of Omaha

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These two articles, with supporting material, have been distributed to the governing bodies of all city and county associations, for the purpose of stimulating the interest of the membership in the matters referred to. County Associations, at their annual meetings, and the House of Delegates, on April 28, 1959, should plan to act on resolutions which will express the official opinion of Connecticut doctors on "Free Choice," "Closed Panel Systems," and "Care of the Aging."

Freedom Of Choice

WILLIAM R. RICHARDS, M.D.
New Haven

"FREEDOM of choice" means the right of the individual to exercise, without restraint, selection among alternatives. As applied to medical care, it means an individual should have the right to select a physician of his choice. The medical profession subscribes to, supports, and strives to attain complete acceptance and application of this principle of "freedom of choice". (Report of the AMA Commission on Medical Care Plans".)

"The outward manifestation of the American system at work is freedom of choice for the individual in every activity of his life. The more that society can contrive to leave him free to select the aims for his life and the means of satisfying his own needs, as he conceives them to be needs, the more willingly will he give of his best efforts in order that those ends may be attained." ("The American Way" by Clarence Randall.)

As forceful and apparently convincing as these statements may be, the AMA House of Delegates, in December, 1958, has nevertheless asked us the question: "Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable and essential to good medical care, without qualification?"

The AMA Commission points out that, over the years, the medical profession itself has restricted this principle in its application to certain situations. It has done so by establishing systems of staff appointments granting only limited privileges; by the certification of specialists and granting to them privileges denied to other physicians; by permitting hospitals to assign physicians to certain fields of

medical service (radiology, pathology, anesthesia); by sanctioning certain third party agencies which will make payment only to participating physicians.

By these actions, it seems evident that the profession has long since established the fact that some restriction of free choice is not only permissible but may even be desirable in the providing of the highest quality of medical care.

In their efforts to widen this loophole, our well-organized antagonists are contending that our insistence on "free choice of physician" at all, is an oft-repeated—but not very convincing—argument against those systems of prepayment for health care which deny it; specifically, closed panel clinics and hospitals. They argue that patients who subscribe to such plans are not coerced into doing so, but join willingly; that they are free to discontinue the arrangement at the termination of their annual contract; and that, at any time, they can obtain their medical care through orthodox channels if they so desire. This, in the opinion of those who are promoting such systems, constitutes a sufficient measure of "free choice" and they point out that organized medicine—which opposes this concept—is in the paradoxical position of wishing to deny patients the right to join this type of prepaid medical group, while insisting on their right to "free choice".

"Free choice", the AMA Commission goes on to say, "is an important factor in the provision of good medical care." But the same commission, studying closed panel systems, has observed that care of good quality is being made available to patients who do not enjoy free choice of physician, in the literal sense of the term. This is quite possible,

they say, when the sponsors of these systems have accepted their obligation to see that plan physicians are well qualified. Therefore, the Commission arrives at the somewhat ambiguous conclusion that good medical care does not necessarily require "free choice" to achieve it, although it in no sense results from an absence of "free choice".

Its report, then, acknowledges the importance of free choice of physician, but does not explain the basic nature of its importance. It indicates that the profession, on its own, has restricted the application of this principle in certain situations, and it finds that such freedom is not necessary to assure a high quality of medical care, as evidenced by its study of a number of closed panel systems.

If the doctors of Connecticut are willing to accept, as facts, the findings and conclusions of the Commission, there would appear to be little or no need for further discussion of this matter.

The same report describes some of the advantages and disadvantages of closed panel systems as they apply to the patient, and the effects of these clinics, health centers and hospitals on local, established physicians; on those who participate, as well as on those who elect to continue in private practice.

The question we are asked to answer, however, is not whether closed panels are good or bad, desirable or undesirable, in the public interest or against it. The question posed to us is: "What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?"

Here again, it would seem we need waste little time in rattling our spears and in telling each other to what extremes we will go in our efforts to discourage our members from participating in these closed plans. It appears from the report that, in practical terms, our attitude may just as well be to wish our defecting colleagues good luck in their new venture, and assure them that local units of organized medicine stand ready at all times to protect them against exploitation by the agencies which employ them.

This disheartening conclusion is based on the fact that the Commission found that in almost every case in which county and state medical societies have tried to protect themselves against the intrusion of closed panels into their communities (by withdrawing or denying membership to participating physicians) the courts have ruled against the societies on the grounds that they were violating federal or state anti-trust laws and were guilty of attempting to restrain trade.

In considering this question, then, there would seem to be no satisfactory answer which is not almost sure to be ruled illegal. Our injured sense of

justice will be denied expression, no matter what our attitude may be.

From such information as has been presented thus far, there would seem to be little hope of our drafting answers to these two questions which would be convincing to ourselves, let alone to our opponents in this struggle for the preservation of freedom in the practice of medicine. Our collective consent to the denial of free choice of physician and our official recognition of the closed panel clinic as a health agency which can provide better medical care and at far less cost to the public than we can under the free system, is all that our antagonists need to render us the final socialistic blow—a blow which will not be painless or merciful in its delivery. Must we indeed become the victims of our tormentors, who not only appear to have the law on their side but also receive a measure of support from our own ranks?

Only a few short years ago, as eminent a physician as Dr. Will Mayo is quoted thus: "The people will demand—the medical profession must supply—adequate means for the proper care of patients, which means that individualism in medicine can no longer exist."

This thought has been carefully nurtured into a complete philosophy, the exponents of which constantly tell us that our medical thinking in the socio-economic field is outmoded, unrealistic and 20 years behind the times. They claim that self-interest carries the leaders of organized medicine past all boundaries of reality; that it makes it necessary for them to continue to deny that the fee-for-service system is obsolescent and that instead of preserving the physician-patient relationship, it is damaging it. They propose the elaborate closed panel clinic as a cure-all for these ills.

We certainly do not deny that there is a limited need for such centers for diagnosis and treatment as Dr. Mayo developed. But many of us are aware, from personal experience, that the cost of a complete workup in these centers is quite considerable and that in many instances, the diagnosis made, and the therapy instituted, differ little if at all from the conclusions drawn by local community physicians. In any event, the majority of doctors who engage in private practice and take pride in their work, probably do not believe that these highly specialized centers are desirable or necessary for the care of the average patient or for the prevention and cure of most ordinary diseases. It is evident that if these super-specialists were to have their working hours wasted in looking after stubbed toes, chicken pox and nosebleeds, they would have little time to devote to those patients whose obscure signs and symptoms of disease present baffling challenges to

their diagnostic skills. The principal reason they are not so encumbered is that private physicians screen the cases which may ultimately come to them, giving competent care and faithful service to those whose illness is of a more apparent or ordinary nature, and referring to diagnostic centers only those problems which are unusual.

Then too, the disparagers of organized medicine are firmly convinced it is not in the public interest for physicians to continue to establish the health policies of the nation. They contend that there will be better medicine practiced when the consumers of health care and their organizations establish the over-all policies of matters pertaining to health. They are gracious enough to grant to physicians the privilege of continuing to occupy the role of technical experts in the carrying out of such policies, but under federally operated, union operated, or management operated health centers and hospitals. Every conceivable service will be offered to patients under one roof and fee-for-service will be replaced by straight salary. They figure to effect great economies in the cost of medical care by basing their calculations on the assumption that if one doctor in one day sees ten patients in his office at five dollars a visit, he can just as well see fifty patients at the clinic at the rate of one dollar a visit, without suffering loss of income; that a surgeon, whose private fee for a major operation is five hundred dollars, can just as well perform five clinic operations at one hundred dollars each, thereby doing good for more people and suffering no financial loss in the bargain. How little these people really know about the practice of medicine!

Under their system, they say, doctors will have no financial stake in sickness but will have a great stake in health. Patients will no longer stay away from the doctor because of the cost involved since, figuratively speaking, it will cost them nothing. Clinic physicians will urge subscribers to come in for medical service whether they are sick or well; whether they need it or not. All will be efficiency and economy and security; health and happiness will reign supreme; the doctor and his patient will never have had it so good!

Is there no loophole in this scheme and is there no fallacy in this reasoning? Is there actually nothing left to recommend private practice as we know it, and is the assembly-line system of medical care the one most people really want? If so, why do we persist in repeating what are called our "anti-quoted pronouncements"; why do we struggle to retain what so many non-medical experts, and even a few medical men, recognize as a system which is inefficient, uneconomical, unfair and even unprincipled?

Surely we are not fools; surely we must know of something—some small bit of evidence—to justify our apparently untenable position in this changing order. What can we say in our own behalf—what philosophical concepts can we advance—which might even partially neutralize the arguments of those who speak largely in terms of per capita and percentages when they speak of medicine and of the doctors who practice it and of the patients who are its beneficiaries?

We might possibly voice the opinion that our profession is, above all, dedicated to give medical care to any and all who need it. Yet by necessity, it is also our business and its practice is our only livelihood. We charge for our services, of course, but there is nothing at all improper about that and it is certainly a willful distortion of the truth to allege that we profit from sickness or are interested in disease only as a source of income. Unlike most others who sell goods and services, we require no prior guarantee of payment and our patients need sign no promissory notes, either before or after treatment is rendered. To those who have no funds at all, we offer our services gratis, and for those of limited means, we downgrade our usual charges to fit their budgets. In his dealings with what other businessman does the customer get such a fair shake?

Most of us can recall the happy days of the twenty-five cent haircut, the seven hundred dollar automobile and the forty dollar custom-made suit. Today, we are confronted with the two dollar haircut and the five thousand dollar "low-priced" car—representing increases in their cost of 500 per cent, and more, in the past 20 or 30 years. But except for a few minor complaints, the purchase of these items has not been curtailed and no one has suggested that something will have to be done to socialize or otherwise regulate the people who sell them. It appears that only the doctor must be denied his freedom to practice as a private businessman.

And yet what is the record of physicians in this inflationary spiral of wages and prices? It is certainly quite different and really quite unique. Excluding those few members of our profession who selfishly and regularly overcharge for their services, our fees have increased not more than 100 per cent, on the average, since the mid-thirties.

What comparable thing of value—what equal measure of competency and skill—can the wage earner buy today for the price of a visit to his doctor? Two cartons of cigarettes, perhaps, or a bottle of whiskey? One half of a beauty treatment for his wife or a tankful of gasoline for his car?

And what major item of luxury or convenience or even of necessity—can the present-day working man purchase for a sum comparable to that charged

by a surgeon, in whose expert hands his very life may rest?

And what other group, professional or otherwise, has shown a willingness such as we have to establish and to foster the growth of a plan in Connecticut which offers practically complete payment of our bills to hundreds of thousands of our fellow citizens whose family income is \$5,000 or less?

This is not the time for us to blow our own horn about our many philanthropic contributions to the public health and welfare. This is the time for us to talk of our record in the matter of our charges for medical service. This is the time for us to talk of money, since that is the cornerstone of the case our antagonists are building against us in the minds of the people. In this peculiar age, when guitar strummers after a few years of crooning silly ditties, can afford every luxury known to man, it is difficult to make the voice of reason heard. In these hectic times, when bobby-sox heroes are reported to have gross annual incomes of millions from the sale of records and autographed trinkets, perhaps it may be easier than we think to educate people to believe that a doctor is not worth his salt; that a highly skilled and competent professional man is not properly entitled to a fair day's pay for a day's work—and on his own terms. We are not envious or jealous men but certainly we can properly plead for equality and justice.

It is certain that such education is being attempted, and with some degree of success. It is a major project of some of our prominent labor leaders and some of the legislators they worked so hard to get elected. Physicians are being given the full treatment on charges of greed by the very same people who themselves, only recently, publicly announced that they intended to push ahead with a new round of bids for higher wages and shorter hours and more fringe benefits, despite the President's plea to hold the line. These men are demonstrating no concern for the public good, though their hearts are proclaimed to be bleeding freely for the common man and particularly for the aging who are hit hardest by inflation. Theirs is largely a plan to obtain power; to gain control of the masses; to socialize those they wish to socialize; to secure ever greater compensation for the services of

those they govern, and only for them. Let them compare their record with ours in these matters!

It is difficult to attempt to present evidence of this kind without introducing a personal note and asking for a directed verdict from this jury—the doctors of Connecticut. But it would seem that certain conclusions are reasonably obvious.

Whatever "free choice" may mean in its narrowest literal sense, or exactly how essential its preservation is to providing the highest quality of medical care, we may perhaps never be able to ascertain beyond a reasonable doubt. But if we cannot be entirely sure of its intrinsic value when it is in force, we have ample proof of what its denial may accomplish. It is a matter of public record that in denying "free choice" of anything to many thousands of hard-working, honest wage earners, certain of our union antagonists were able to build for themselves personal empires, riddled with graft and controlled by hoodlums who spent the members' money like water in the pursuit of riotous living and personal profit. Let us be wary of any system which can foster such corruption!

The entire structure of the American system is based on preserving the maximum of freedom consistent with law and order and this system is certainly broad enough and sound enough to include the right of the patient to choose his own doctor, and even that of the doctor to choose his own patients. Neither party will benefit from being held captive by the almighty dollar, no matter how much efficiency and economy may result from such captivity. Man does not live by bread alone!

It must be fervently hoped that Connecticut doctors will therefore strongly support the fundamental principle of freedom of choice of physician and reaffirm their faith in it as a desirable and important adjunct to providing the best medical care to the public.

It must also be hoped that while they will not claim to know much of the untested benefits which may or may not be derived from closed panel systems, they will resolve to work constantly to retain and improve on the known qualities of the system of the private practice of medicine which have contributed so substantially to making this one of the healthiest states in the Union.

Care Of The Aging

WILLIAM R. RICHARDS, M.D.

New Haven

The AMA House of Delegates, on December 4, 1958, adopted the recommendation that "The AMA, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group (of people) over 65 with "modest resources" or "low family income"; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such . . . plans at a reduced premium rate."

There are two adjectives in the English language which would best seem to describe the essence of this recommendation: "altruistic" and "idealistic". Altruism, by definition, is the unselfish consideration of others. Idealism is defined as the quality of seeing things as we wish they were, instead of as they are; the opposite of realism.

With rather few exceptions, doctors are actively practicing altruists. In the history of American medicine, there have been very few authenticated reports of people of any age being denied proper medical care because of a relative or absolute inability to pay for it. Adherence to this principle of providing service to all who need it is the very backbone of our professional philosophy and most physicians have no desire to welsh on the obligations and responsibilities they voluntarily assumed when they took the Hippocratic oath.

It would seem reasonable to assume, then, that the doctors of Connecticut can readily accept that part of this AMA recommendation which urges them to "expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income." In the development of plans of this general nature, they have already had considerable experience. Almost twelve years ago, in 1947, the House of Delegates of the Connecticut State Medical Society embraced the "service benefit" provision of a Connecticut Medical Service plan which was designed to achieve an identical goal for people of *all ages* who had modest resources or low family income—or even low individual income. This program, in practice, has worked out rather well. Only last year, it was made public that over 90 per cent of the state's doctors were participating in it and that service benefits were being accorded to over 60 per cent of the subscribers, whereas only about 50 per cent were actually entitled to them under the contract. CMS—

the doctors' plan—represents a most commendable example of altruism at work and is concrete evidence of our willingness to expedite the development of voluntary prepayment programs.

When we examine the second part of this recommendation—"that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such plans at a reduced premium rate."—we find ourselves on less secure ground. On the average, CMS service payments already represent reduced fees to a majority of participating physicians who have agreed to accept them as payment in full for medical care rendered to all subscribers with an annual family income of \$5,000 or less. Should the AMA recommendation, as it applies to Connecticut doctors, be taken to mean that such payments need to be further downgraded in order to make possible the development of new or special contracts for people over 65? Probably not; but if so, this is the point where we begin to encounter idealism which, in its practical application, is much more difficult to implement than is altruism. This is where some people, having the noblest of intentions, may start to look at things as they wish they were rather than as they are. "After all," the idealist may argue, "what does a physician really lose when he gives his services at a reduced fee? He is required to buy no stock of goods to sell. His business is in his head and so whatever he makes is all clear profit."

It is true that very few medical services can be seen by one's eyes or held in one's grasp. Such services are largely intangible and when they are sold, the customer usually receives very little that is material or has substance. Yet in conducting the business of providing these rather intangible services to the public, there is considerable—and very real—expense involved. Every practitioner is keenly aware of the substantial portion of his gross annual income which must be paid out for office rent, salaries and the like. He also realizes, sometimes from bitter experience, that he is legally liable for the results of his treatment and that he can be sued for malpractice or negligence, whether he has charged for his services or not.

So that however much a doctor may desire to give freely and charitably of his professional abilities, there are always these realities to be faced. They make necessary some small limitations of the scope of his altruism and place much greater limitations on the scope of his idealism. It is difficult for

him to aspire to be an idealist when he so seldom encounters altruism in the philosophy of those who sell him the goods and services which he requires to meet his own personal and professional needs. Who of us has not heard one of our creditors ask somewhat jokingly, "What do you think, doc, I'm in business for my health or something?" All private enterprise must show a profit and the practice of medicine is no exception. Any other policy invites bankruptcy.

It would appear, therefore, that the entire AMA recommendation relative to "Care of the Aging" can be adopted in good faith by our State Medical Society and its component county associations. This we can do if our local Blue Shield medical care plan has developed or will shortly develop a prepayment plan for the aging without deeming it necessary to further reduce the level of compensation for our services presently allowable under the service benefit provision. We are given to understand that this can be done and, if so, let us give such a plan our full support in the interest of our senior citizens.

But let us not be lulled into thinking that the mere adoption of this recommendation completely discharges our obligation in the matter of care of the aging. The spokesmen for organized labor have labelled this gesture of the AMA and its members "unrealistic" and offering "too little, too late." These are the people who strongly advocate passage of the *Forand Bill* and will be satisfied with nothing less than the formal addition of "free" medical care to the benefits of Social Security.

An AFL-CIO official is quoted as saying: "This is just about our No. 1 target in the welfare field." Walter Reuther, President of the UAW, is reported to have this health scheme on his "must pass" list.

The *Forand Bill* calls for 60 days "free" hospital care and up to 120 days "free" nursing home care as well as certain "free" surgical, dental and medical services for those receiving Social Security checks. Conservative estimates are that this plan would cost more than a billion dollars a year to start, and since it would cover some 15 million older people who generally require more health care than average, the ultimate cost of operation may be fantastic. And 1959-60 is supposed to be the year for curtailment of deficit spending and for maintaining a balanced budget!

The "bleeding hearts" who call most loudly and persistently for the passage of this legislation, completely ignore the fact that social security, as it now functions, is operating in the red to the tune of 700-800 million dollars a year. It will require progressively increasing contributions on the first \$4,800 of wages, up to 9 per cent by 1961 (4½ per cent each by employer and employee) to achieve even a reasonable degree of solvency.

They also ignore the fact that federal expenditures for "Old Age Assistance" are not being reduced, as expected, by the increase in the number of older people now receiving Social Security insurance. These expenditures are actually greater than ever. The reason for this paradox has been discovered to be that, in the face of the fifty cent dollar, Social Security payments are often insufficient to provide recipients with the barest necessities and "Old Age Assistance" is in greater demand than ever, and by more and more people.

Yet the union leaders and their liberal political friends nevertheless seek the adoption of even more expensive social welfare schemes in the health field without the slightest concern as to whether they are economically sound or practical.

Over 100 years ago, a French author by the name of Frederic Bastiat wrote thus in a book called "The Law": "Man can live and satisfy his wants only by ceaseless labor, by the ceaseless application of his faculties to natural resources. This process is the origin of property. . . . But it is also true that a man may live and satisfy his wants by seizing and consuming the products of the labor of others. This process is the origin of plunder. . . . It is evident . . . that the proper purpose of the law is to use the power of its collective forces to stop this fatal tendency to plunder. . . . But generally the law is made by one man or one class of men. . . . It is therefore easy to understand why the law is used by some legislators to destroy, in varying degrees among the rest of the people, their personal independence by slavery; their liberty by oppression; and their property by plunder."

"Sometimes the law defends plunder and participates in it. Thus the beneficiaries are spared the shame, danger, and scruple which their acts would otherwise involve. Sometimes the law places the whole apparatus of judges, police, prisons and gendarmes at the service of the plunderers, and treats the victim—when he defends himself—as a criminal."

This is the position into which certain so-called labor leaders are attempting to force the medical profession. Doctors are to be represented as being somehow responsible for the economic plight of many of our senior citizens, not only as regards their health care but also as regards their other essential needs—food, clothing and shelter. "Medical care" is something concrete enough to be made into a political football, as Karl Marx well knew. It is a lot more difficult to put one's finger on the group to be socialized when realistic provisions for supplying food, clothing or shelter are deemed lacking. But doctors—and to a lesser degree hospitals—have been selected as easy marks by the welfare planners.

Any constructive gesture of altruism on the part

of organized medicine, in the only area in which it is properly concerned, is quickly written off by these people as "unsatisfactory". They say they have been telling us for years that we must do something about the financing of medical care for everyone, let alone the aging, and that now it is too late—we have delayed too long. Our Blue plans are inadequate because they say they are. Now is the time for the government to step in and save the American people from our greedy clutches, they contend. We are no longer looked upon as medical practitioners, which we are, but as medical financiers, which we are not. We have become the whipping boys of the unions and of the liberals in government—the socializers—who believe that federal controls and federal funds must eventually supply everyone with everything!

But Bastiat also wrote in 1850, "You say there are people who have no money and you turn to the law. But the law is not a breast that fills itself with milk. Nor are the lacteal veins of the law supplied with milk from sources outside the society. Nothing can enter the public treasury for the benefit of one citizen or class unless *other* citizens and *other* classes have been *forced* to send it in. If every person draws from the treasury the amount that he has put into it, it is true that the law plunders nobody. But this procedure does nothing for the person who has no money. It does not promote equality of income. The law can be an instrument of equalization only as it takes from some persons and gives it to other persons. When the law does this, it is an instrument of plunder. With this in mind . . . examine . . . guaranteed profits, guaranteed jobs, relief and welfare schemes, . . . progressive taxation. . . You will find they are always based on legal plunder; on organized injustice."

It is reassuring to learn that over a hundred years ago, this man could even then see clearly through the seductive veils of Socialism and perceive the weaknesses in its principles—the injustices in its practice. He wrote brilliantly and forcefully against its evils and yet he was charitable enough to say that he did not impugn the motives of its advocates. He questioned only the straightness of their thinking and the soundness of their conclusions. He wrote: "Socialism, like the ancient ideas from which it springs, confuses the distinction between government and society. As a result of this confusion, every time we object to a thing being done by government, the socialists conclude that we object to its being done at all. . . It is as if the socialists were to accuse us of not wanting people to eat because we do not want the state to raise grain."

Perhaps this confusion in thinking which he described so clearly in France in his time, still exists among those who embrace the socialist philosophy in America today. Perhaps their goals in the medical care field are basically the same as our own—and equally worthy. Perhaps we differ only as to the best method by which these goals may be achieved.

We believe our way of providing prepaid medical care to the aging, and to all others, is the best way—the free way—the American way. We believe theirs is not and will prove most unfair and unsatisfactory in the long run. We must not only oppose their plan with vigor; we must give our plan the "hard sell" to our profession, to the public and especially to those who make our laws. Perhaps we can yet make the voice of reason heard above the din and clamor created by the devoted exponents of the welfare state.

Physical Activity And Coronary Disease

"Physical activity of work is a protection against coronary (ischaemic) heart disease. Men in physically active jobs have less coronary heart disease during middle-age, what disease they have is less severe, and they develop it later than men in physically inactive jobs." Drs. J. N. Morris and Margaret D. Crawford drew this hypothesis from a study of 3,800 noncoronary deaths in men 45 to 70 years old. Postmortem examinations of coronary arteries were made in these men.

The report shows that 13.4 per cent of the light workers had had ischemic myocardial fibrosis as against 6.8 per cent of the heavy workers. While 3.5 per cent of light workers had large fibrous patches as against 1.2 per cent of heavy workers, 9.9 per cent of light workers and 5.7 per cent of heavy workers revealed smaller multiple scars. Healed infarcts were noted more among the younger group than in the group 60 to 70 years of age.

The authors suggest that "habitual physical activity is a general factor of cardiovascular health in middle-age, and that coronary heart disease is in some respects a deprivation syndrome, a deficiency disease." But this does not mean that coronary heart disease among heavy workers is something to be dismissed; it is common enough to constitute a major health problem. (*British Medical Journal* 2:1518, December 20, 1958.)



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News From Washington

Committees Starting To Move On Health Issues

With all Congressional committees appointed and most of them organized, Capitol Hill is starting to see action on bills with public health or medical implications. House Armed Services Committee opened hearings on Administration bill extending draft act four more years, with retention of section authorizing special callups of physicians and dentists. Among other developments:

American Hospital Association and AMA filed statements in January with Senate Banking and Currency Committee requesting a more liberal and flexible college housing program in the interest of intern and nurse training.

Consideration is being given establishment of a special subcommittee of House Ways and Means Committee to hold public hearings this spring on social security amendments. Its chairman and most important figure would be Rep. Aime J. Forand (D., R. I.).

Senate is witnessing mounting support for establishment of a standing committee on veterans' legislation.

A bill (S. 535) introduced by Senator Thomas C. Hennings, Jr., (D., Mo.) amends FDA Act to step up control over amphetamines and barbiturates. "It has been my experience," he said, "that local authorities have difficulty in enforcing laws in this field unless they are bolstered by Federal laws."

FAA Putting Aeromedical Tasks In Medical Hands

Reversing previous thinking, Federal Aviation Agency has decided finally and conclusively to set up a strong medical department under medical direction. Its first administrative order specifies that Office of Civil Air Surgeon shall be responsible for assisting administrator in drawing up standards, rules and regulations concerning fitness of flying personnel and air traffic controllers; (b) conducting examinations; (c) taking initiative to further research in aviation medicine; (d) inaugurating a program of occupational medicine.

WRMS reported FAA was thinking seriously of placing medical functions in lay hands, with the Civil Air Surgeon serving more or less as window dressing. The reaction to that disclosure was such, reportedly, as to produce the decision to create a strong medical unit. Note: It should now be less difficult to get a qualified physician to take the job of Civil Air Surgeon.

House Committee News: Commerce Has Turnover

In Congress, most public health and medical legislation is handled by House Commerce Committee and Senate Labor and Public Welfare Committee. House Commerce has many new faces. Composition is as follows:

DEMOCRATS — Harris (chm.), Williams, Mack (Ill.), Roberts, Moulder, Staggers, Dollinger, Rogers (Tex.), Friedel, Flynt, Macdonald, Rhodes (Pa.), Jarman, O'Brien (N. Y.), Moss. Dingell, Kilgore, Rogers (Fla.), Hemphill, Rostenkowski and Brock. REPUBLICANS — Bennett (Mich.), Springer, Bush, Schenck, Derounian, Younger, Avery, Collier, Glenn, Devine, Nelsen and Keith. Note: Listing is by seniority.

Fiscal Group Unchanged

The subcommittee that handles annual appropriation for HEW and Labor Departments, including largest medical research and public health funds in Federal budget, is unchanged from last year: DEMOCRATS — Fogarty (chm.), Marshall and Denton. REPUBLICANS—Laird and Cederberg.

Most Chairmen Keep Seats

For first time, Rep. Thomas E. Morgan, M.D., starts a session of Congress as chairman of Foreign Affairs Committee. Rep. Wayne N. Aspinall is chairman of the Interior and Insular Affairs Committee. Otherwise, House committees have the same chairmen. The new Science and Astronautics Committee is headed by Rep. Overton Brooks, who gave up his seat on Armed Services.

Of the three MD's in House, besides Dr. Morgan, Judd retains seat on Foreign Affairs and Fenton on Appropriations. Alford has been put on Post Office and Civil Service, as reported last week by WRMS.

Senate Committee News: Labor & P.W. Revamped

Liberals predominate on the newly reorganized Senate Labor and Public Welfare Committee. Members are: DEMOCRATS — Hill (chm.), Murray, Kennedy, McNamara, Morse, Yarborough, Clark, Randolph and Williams (N. J.), REPUBLICANS—Goldwater, Cooper, Dirksen, Case (N. J.), Javits and Prouty. Hill will retain chairmanship of subcommittee on health legislation, but other members have not yet been chosen.

Two freshman Democrats got seats on the important Finance Committee, which handles all tax and social security legislation. They are McCarthy (Minn.) and Hartke (Ind.).

Humphrey again will chair the Government Operations Subcommittee on Reorganization and In-

ternational Organizations which will take charge of pending bills enlarging U. S. role in global medical research. Serving with him will be fellow Democrats McClellan, Muskie and Gruening, and Republicans Capehart and Mundt.

Majority Leader Johnson heads the new Committee on Aeronautical and Space Sciences. Dr. Gruening, first MD on Senate rolls in nearly a generation (WRMS No. 602), won places on Interior and Public Works Committees, as well as Government Operations.

1960 Budget Highlights: HEW Dept. Figures Given

House will launch hearings soon on Dept. of HEW's proposed budget for the 1959-60 fiscal year. It provides greater funds for vocational rehabilitation, communicable disease control programs and sanitary engineering activities. Sharp cuts are imposed for Hill-Burton hospital construction grants and similar financial aid in expansion and improvement of medical research facilities, as indicated by WRMS last week. For medical research grants in aid, maternal and child health, and grants to states for general public health activities the allocations are virtually same as they were in current year.

This year Public Health Service is spend \$2 million on public health traineeships and nearly \$6 million on nursing traineeships, both at graduate level. Budget makes no provision for continuation, explaining that authority to conduct these programs, begun in 1956, will expire in June. While it is Administration's intention to request a statutory extension, the money requisition was deferred presumably so as to help hold down size of the budget sent to Capitol Hill.

Senator Hill, as chairman of subcommittee handling HEW's funds bill, will sponsor legislation extending for *five* more years the public health and nursing training programs. Too, he'll resist the Hill-Burton cut—down to \$101 million from current year's \$186 million—and fight for \$30 million in research construction grants, compared with the \$20 million recommended by White House.

For medical evaluation of new drugs, \$626,000 is included in Food and Drug Administration's budget. This division's workload will include inspection of some 21,500 establishments and collection of 43,000 samples for scrutiny.

Veterans Administration

To pay for inpatient care of VA hospital and domiciliary patients, \$786,779,000 is asked in new budget, compared with \$720,667,000 appropriated for this year. An \$8 million increase, to \$83,866,000, for outpatient services is requested.

Higher medical fees are cited as one of the reasons for this appropriation increase.

Atomic Energy Commission

Division of Biology and Medicine, which is spending \$43.2 million this year, has been allowed \$49 million. Greater part of that sum is budgeted for basic research at the Commission's laboratories and in approximately 220 colleges, universities, hospitals and independent laboratories. Separate item is \$6.1 million for isotopes development, which includes grants to teaching institutions for purchase of equipment.

International Health

The budget earmarks \$36.7 million for support of United Nations and specialized agencies, of which \$4,744,000 will go to World Health Organization. A contribution of \$2,310,000 to Pan American Sanitary Organization also is included.

Aid For Civil Defense

Office of Civil and Defense Mobilization budget contains \$310,000 to be used for grants to states purchasing medical supplies and equipment for stockpiling. The sum of \$5.4 million is allowed for storage and maintenance of the Federal stockpile throughout U. S. of emergency hospitals, functional assemblies, drugs, etc.

Health Care Costs Still Climbing In Price Index

Consumer prices dropped 0.2 per cent between November and December, 1958. There were index declines in all categories except housing and medical care. Former rose 0.2 per cent, latter 0.3 per cent. Bureau of Labor Statistics cited "higher fees for services of physicians and dentists and for group hospitalization insurance." The item called "Medical Care" thus preserved its unique record as sole heading in the cost-of-living table to have gone up every month since World War II. Its December index was 147.3 (1947-49=100).

New Medicare Contracts

Medicare headquarters has cleared its first contracts for 1959. Florida, New Hampshire and Puerto Rico renewed by correspondence and North Dakota and Wisconsin, seeking certain "language changes," are expected to sign shortly. February schedule calls for renegotiation with Arizona, California, Georgia, Idaho and Mississippi.

The government budget submitted to Congress by President Eisenhower did not make clear what is being requested to finance Medicare services for Army, Navy, USAF and Public Health Service beneficiaries.

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Two Of Three Acute Illnesses Respiratory, Study Shows

Just published is PHS No. 584-B6, latest in the U. S. National Health Survey series. This installment deals with incidence of acute illness between July, 1957, and June, 1958, as gauged by household interviews in various parts of the country covering 115,000 individuals in 36,000 families. Based on these findings, it is estimated 438 million acute illnesses—65 per cent of them respiratory—were experienced by the American population in this 12-months period.

Three-Year Survey Begun On Workers' Medical Care

Details of a cooperative study to learn how adequate are health services received by unionized workers and families were revealed at a news conference recently. The principals are Into. Assn. of Machinists, U. S. Industries, Inc., Columbia University and National Opinion Research Center. The objective: To find out how nearly 90 million Americans are faring under medical and hospital insurance programs supported wholly or in part by industry.

Financing the three-year study is Foundation on Employee Health, Medical Care and Welfare, Inc., a joint undertaking of machinists union and U. S. Industries, Inc., which was established three years ago. Supervisor of the project is Dr. Ray E. Trussell, chairman of Columbia's School of Public Health and Administrative Medicine. Interviewing and other field work will be done by NORC (University of Chicago).

A 3,000-family sampling is contemplated. There will be 750 families in each of these types of coverage: Blue Cross-Blue Shield; indemnity type, as provided for non-operating railway workers; comprehensive medical expense, as provided for General Electric Co. workers, and the direct service type as represented by Kaiser Foundation on the West Coast.

SOME OF BASIC QUESTIONS

The survey prospectus says answers will be sought to these questions: Which is more important, protection against the catastrophic illness which is comparatively rare or the less expensive, but more common, ailment? Do covered families seek medical care which they might let go by default if they were not protected? Is coverage resulting in an actual saving of money to the employee? Is there a danger of excessive utilization

if co-insurance or some other check is not provided?

Also, what relationship exists between frequency of hospitalization and the type of health insurance possessed? Can a feasible system be evolved to make medicines, eye glasses and home-and-office visits includible? To what extent do periodic health examinations and emphasis on preventive care cut down expenses for treatment? Should free choice of practitioner (including chiropractors) be given?

REGIONAL DISTRIBUTION

Dr. Trussell told Washington Department Medical Service the household interviews will be divided as follows: In New Jersey, 750 families belonging to Blue Cross-Blue Shield and 250 covered by the railway program, administered by Travelers Insurance Co.; upper New York State, Cincinnati and Milwaukee, with total of 1,000 families, three-fourths in the General Electric package (carried by Metropolitan Life) and remainder in the railway plan; San Francisco Bay area, 750 families affiliated with the Kaiser-Permanente program and 250 in the railway health insurance plan.

PILOT STUDY COMPLETED

A dry run conducted recently in New York City produced provocative findings. It covered 286 unionists and 543 dependents. The study disclosed: (1) Substantial use of unaccredited hospitals; (2) use of many physicians who lack staff appointments at accredited hospitals; (3) comparative rarity of coverage for home and office medical care; (4) large expenditures for drugs; (5) uneven distribution of medical costs in spite of relatively good insurance protection; (6) failure to appreciate levels of professional medical competence; (7) better coverage of hospital bills than of doctors' fees for in-patient medical care.

Hospital Administration Research Grants Approved

Federal Hospital Council has approved five grants for research in hospital administration and service. They total \$76,047. The money comes out of the \$1.2 million provided annually in Hill-Burton research funds. Recipients of latest awards: Highland View Hospital, Cleveland, \$31,165; Cornell University, \$19,895; Univ. of Minnesota, \$8,943; University of California, School of Public Health, \$2,294; United Hospital Fund of New York, \$13,750.

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One-Sixth Of Population Looks To U.S. For Medical Care

Statistics collected by U. S. Budget Bureau reveal that Washington has potential responsibility to furnish all or part of medical services for more than 31 million—about 17 per cent of the country's entire population. This takes in 22.7 million veterans, 3.3 million military dependents, nearly 3 million servicemen, and smaller numbers of Indians, merchant seamen, Federal personnel, narcotics addicts, prisoners, Hansen's disease sufferers and others.

Support Of VA Research

The new budget is expected to increase funds for operational and maintenance of veterans hospitals but reduce the appropriation for support of medical research in VA hospitals. With an operational increase of about \$6 million, an average daily census of 140,800 in hospitals and domiciliaries is envisaged. Regarding the research item, \$15 million was available this year and White House reportedly will ask \$11 million for coming fiscal year beginning July 1, 1959.

ATTENTION

All Members Of Ready Reserve (Medical)

The National Committee has voted to notify medical schools and hospitals that if any of their staff or faculty are members of the Ready Reserve, they and the individuals concerned should make note of the fact that they will be expected to go when called and not be declared essential to the institutions at the time such a call is made.

If any such individuals are now in essential positions—either on faculty or staff—they should request transfer from the Ready Reserve to the Standby Reserve; otherwise the Ready Reserve is not a Ready Reserve.

By making such transfer they will, of course, lose pay. They will not lose credit toward retirement.

This should be looked into at the present time and straightened out now rather than waiting for an emergency to occur. In other words, it is essential for the medical schools and the hospitals to determine the military status of the members of their faculties and staffs. In that way and only that way will they realize what their loss would be on the day an emergency is declared.

This obligation of members of the Ready Reserve to serve when called also applies to physicians in private practice. Only in very exceptional cases would such individuals be given consideration for delay due to essentiality.

Senate Passes Housing Bill With Nursing Home Loan Guarantees

The Senate, in February, passed the Housing bill carrying authority for the guarantee of nursing home mortgages, a provision actively supported by the American Medical Association and the American Association of Nursing Homes.

Just prior to the final vote, an amendment by Senator John J. Sparkman (D., Ala.) was adopted. It permits a nursing home operator whose application has been turned down by the state Hill-Burton authorities to appeal to the FHA commissioner. As reported out by the Senate Banking and Currency Committee, the measure would deny loan guarantees to a nursing home applicant unless the Hill-Burton authorities decided the institution was needed in the particular community. The AMA supports full FHA control without mandatory supervision from HEW and the Hill-Burton organization.

Also revised by the committee was the definition of a nursing home. Under the language now in the bill, the home would have to be a proprietary facility for the accommodation of convalescents or others not acutely ill and not in need of hospital care, "but who require skilled nursing and medical services . . . prescribed by or performed under the general direction of persons licensed to perform such care and services. . . ."

House Committee Approves Bill Extending Doctor Draft

House Armed Services Committee in February cleared legislation for a four-year extension of the regular draft act and with it the doctor draft, and sent the bill on to the House where action is imminent. Without an extension, both provisions would expire next June 30.

At the hearing, representatives of the military services testified that without the compulsion of the draft laws there would not be enough volunteers to maintain the armed forces and their medical departments. Under the act doctors who have obtained an educational deferment are subject to call up to age 35, whereas other registrants are free of obligation after age 26.

In a statement addressed to Chairman Carl Vinson, AMA Executive Vice President F. J. L. Blasingame made several recommendations for changes in the doctor draft. He proposed that other specialists, such as engineers and physicists, also be subject to the special call, along with doctors, a suggestion the committee did not adopt. Dr. Blasingame also urged that careful consideration be given to all factors, including technical military advances as well as decreasing manpower needs, before the four-

year extension is enacted. On the basic issue of continuing the law, Dr. Blasingame's statement declares:

"... The American Medical Association wishes to reaffirm its position outlined in testimony... in May, 1957... on the bill subsequently enacted. At that time the Association testified that, '... if the demands for the defense and security of our nation are such that, in the opinion of Congress, it is necessary to have a draft act to maintain the strength of our Armed Forces, then the extension of the present legislation would be one method to insure sufficient physicians for the military services.'"

Dr. Blasingame added that the AMA believes physicians should be registered and classified in the same manner as others of the same age group, given educational deferments in the same manner, and called to duty "under the same general provisions as other registrants deferred for educational purposes."

54 Senators Sponsor International Health And Medical Research Act

One of the first bills for the newly formed health subcommittee of the Senate Labor Committee to dig into is *S.J. Res. 41* sponsored by 54 Democratic and Republican Senators. It provides for (1) a national institute for international medical research as part of the National Institutes of Health, (2) a national advisory council, (3) \$50 million annually for research under supervision of NIH.

Senator Hill, a leader in pushing this measure, told the Senate it was designed (1) to encourage and support planning of essential research on a world-wide basis, (2) to encourage and support coordination of medical and medically-related experiments and research in the U.S. with complementary programs abroad, (3) to encourage and support training of specialized research personnel, and (4) to support specific research projects and experiments, and (5) to encourage and support rapid informational interchange of medical knowledge on diseases and disabilities.

Senate Committees Important To Medicine: Keep This List

Following, by parties, is the complete membership of all Senate committees that handle legislation of importance to medicine. We suggest you save this list for reference when health bills are before the committees.

APPROPRIATIONS. *Democrats* — Carl Hayden, Chairman, Ariz.; Richard B. Russell, Ga.; Dennis Chavez, N. M.; Allen J. Ellender, La.; Lister Hill, Ala.; John L. McClellan, Ark.; A. Willis Robertson, Va.; Warren G. Magnuson, Wash.; Spessard L. Hol-

land, Fla.; John Stennis, Miss.; Lyndon B. Johnson, Tex.; John O. Pastore, R. I.; Estes Kefauver, Tenn.; A. S. Mike Monroney, Okla.; Alan Bible, Nev.; Robert C. Byrd, W. Va.; Thomas J. Dodd, Conn.; Gale W. McGee, Wyo.; *Republicans*—Styles Bridges, N. H.; Leverett Saltonstall, Mass.; Milton R. Young, N. D.; Karl E. Mundt, S. D.; Margaret Chase Smith, Me.; Henry Dworshak, Idaho; Thomas H. Kuchel, Calif.; Roman L. Hruska, Neb.; Gordon Allott, Colo.

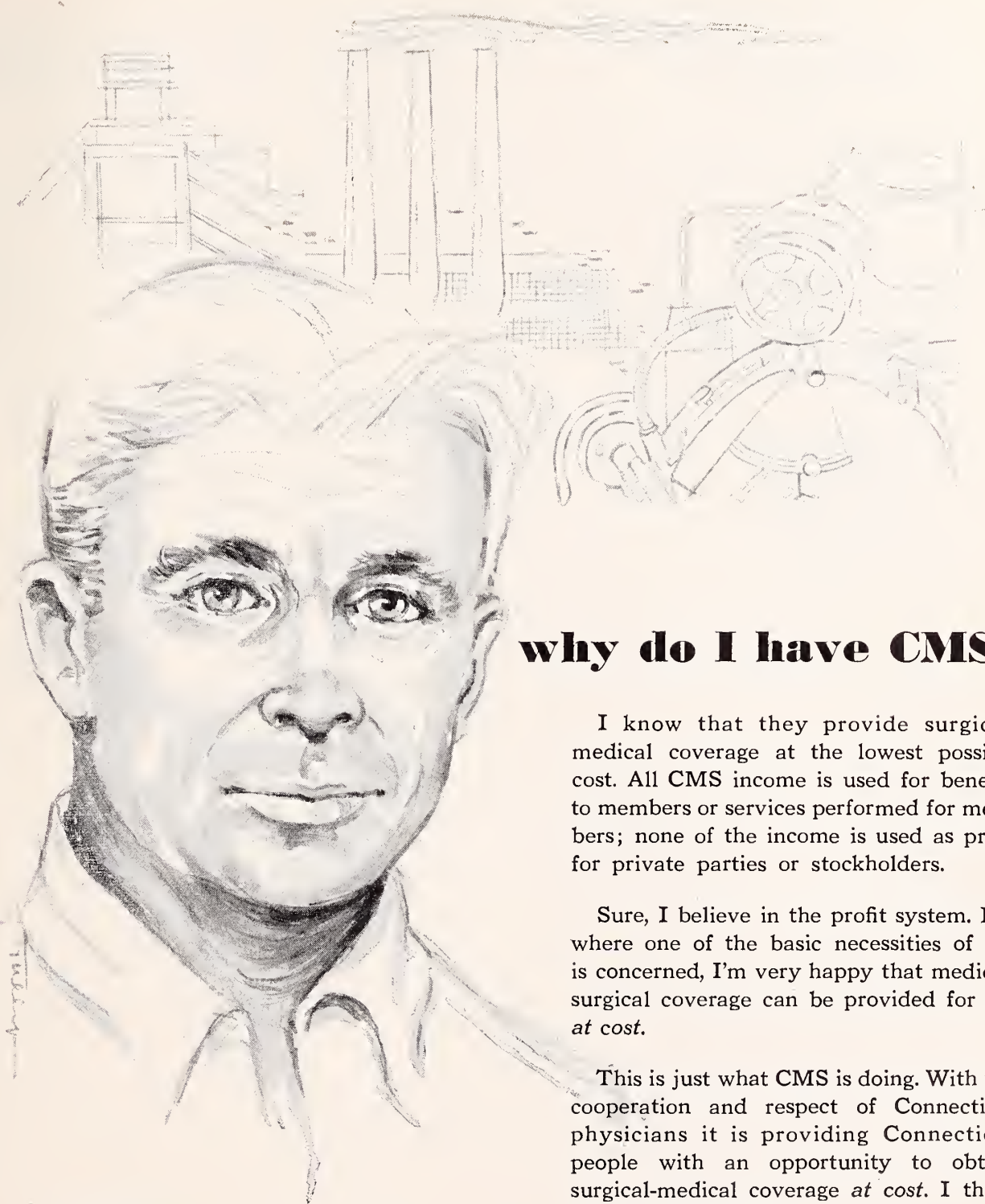
ARMED SERVICES. *Democrats*—Richard B. Russell, Chairman, Ga.; Harry Flood Byrd, Va.; Lyndon B. Johnson, Tex.; John Stennis, Miss.; Stuart Symington, Mo.; Henry M. Jackson, Wash.; Sam J. Ervin, Jr., N. C.; Strom Thurmond, S. C.; Clair Engle, Calif.; E. L. Bartlett, Alaska; Howard W. Cannon, Nev.; *Republicans*—Leverett Saltonstall, Mass.; Styles Bridges, N. H.; Margaret Chase Smith, Me.; Francis Case, S. D.; Prescott Bush, Conn.; J. Glenn Beall, Md.

BANKING AND CURRENCY. *Democrats*—A. Willis Robertson, Chairman, Va.; J. W. Fulbright, Ark.; John Sparkman, Ala.; J. Allen Frear, Jr., Dela.; Paul H. Douglas, Ill.; Joseph S. Clark, Penna.; William Proxmire, Wis.; Robert C. Byrd, W. Va.; Harrison A. Williams, Jr., of N. J.; Edmund S. Muskie, Me.; *Republicans*—Homer E. Capehart, Ind.; Wallace F. Bennett, Utah; Prescott Bush, Conn.; J. Glenn Beall, Md.; Jacob K. Javits, N. Y.

FINANCE. *Democrats*—Harry Flood Byrd, Chairman, Va.; Robert S. Kerr, Okla.; J. Allen Frear, Jr., Dela.; Russell B. Long, La.; George A. Smathers, Fla.; Clinton P. Anderson, N. M.; Paul H. Douglas, Ill.; Albert Gore, Tenn.; Herman E. Talmadge, Ga.; Eugene J. McCarthy, Minn.; Vance Hartke, Ind.; *Republicans*—John J. Williams, Dela.; Frank Carlson, Kan.; Wallace F. Bennett, Utah; John Marshall Butler, Md.; Norris Cotton, N. H.; Carl T. Curtis, Neb.

LABOR AND PUBLIC WELFARE. *Democrats*—Lister Hill, Chairman, Ala.; James E. Murray, Mont.; John F. Kennedy, Mass.; Pat McNamara, Mich.; Wayne Morse, Ore.; Ralph Yarborough, Tex.; Joseph S. Clark, Pa.; Jennings Randolph, W. Va.; Harrison A. Williams, Jr., N. J.; *Republicans*—Barry Goldwater, Ariz.; John Sherman Cooper, Ky.; Everett McKinley Dirksen, Ill.; Clifford P. Case, N. J.; Jacob K. Javits, N. Y.; Winston L. Prouty, Vt.

POST OFFICE. *Democrats*—Olin D. Johnston, Chairman, S. C.; A. S. Mike Monroney, Okla.; Richard L. Neuberger, Ore.; Ralph Yarborough, Tex.; Joseph S. Clark, Pa.; B. Everett Jordan, N. C.; *Republicans* — Frank Carlson, Kan.; William Langer, N. D.; Thurston B. Morton, Ky.



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Senators On Health Subcommittee Propose Two-Year Study

Senators Javits (N. Y.), Case (N. J.) and Cooper (Ky.), Republican members of the health subcommittee of Senate Labor Committee, are sponsoring a measure (*S. J. Res 43*) for a two-year study of the health needs of all citizens. The 15-man commission would recommend to the President and to Congress necessary legislation to supplement or stimulate broader health protection coverage by existing private and non-profit programs. The commission, made up of three public and 12 non-governmental members, would examine the following areas:

1. The adequacy of existing programs of health insurance and group or cooperative health plans in meeting overall health service needs;
2. Necessity for extending health insurance coverage to provide adequately for retired or elderly persons, those temporarily unemployed, and those suffering from mental illness;
3. Problems experienced by the aged, members of racial or other minority groups and residents of rural areas in securing health insurance;
4. The effect which expanded coverage of such plans would have upon the adequacy of the existing number and distribution of health personnel and facilities.

New Legislation

A number of new bills concern hospitalization. Senators Bible and Cannon (D., Nev.) want the Hill-Burton act changed so small states can shift hospital-clinic grants from one category to another to make more effective use of Federal money (*S. J. Res. 1*). Senator Kefauver (D., Tenn.) in *S. 717* proposes a new approach to the narcotic addict problem by having the U.S. set up clinics for treatment of post-hospital and voluntary patients: also, patient records, now confidential by law, would be opened up to physicians treating addicts. Retired military officers and enlisted men would be entitled to VA hospitalization where available under *H. R. 1164*, by Rep. Rhodes (R., Ariz.). Rep. Anderson (D., Mont.) hopes the U.S. will give states \$2 million to survey the need for public housing for the aged and to develop plans, and \$150 million a year for three years to finance construction of such institutions, which would have to have a medically-supervised infirmary in connection. The Anderson bill is *H. R. 997*. . . . Miscellaneous new bills—*S. J. Res. 1* by Senator Johnston (D., S. C.) would set up a commission to study problems of the aged and report back in a year with recommendations for action. *H. R. 1025* by Rep. Multer (D., N. Y.) again asks that the President be given authority to take over supervision of use, distribution and price of medicinal substances, particularly vaccines and

serums, under emergency circumstances. *H. R. 1292* by Rep. McDonough (R., Calif.) asks legislation to allow a three-year carry-over of medical expenses in excess of the annual maximums now permitted by the income tax laws. Another McDonough bill (*H. R. 1297*) renews this Representative's request that Congress prohibit use in interstate commerce of any motor vehicle that discharges unburned hydrocarbons in excess of limits set by U.S. Public Health Service. *H. R. 1875* by Rep. Osmer (R., N. J.) urges Congress to authorize voluntary social security coverage for physicians; however, once a decision was made to enter the system, it would be irrevocable. *H. R. 1251* by Rep. Green (D., Ore.) offers a five-year, \$200 million program of U.S. grants and scholarships to aid in construction of nursing schools and provide scholarships.

Socio-Economic Director Named

Dr. Franklin C. Yoder of Cheyenne, Wyoming, has been named director of the Division of Socio-Economic Activities of the American Medical Association.

Dr. Yoder will assume his duties on a part-time basis until July 1, said Dr. F. J. L. Blasingame, AMA executive vice president, in announcing Dr. Yoder's appointment.

PH Director: Dr. Yoder comes to AMA from the Wyoming Department of Public Health where he has been director since 1947. He was in private practice in Cheyenne from 1940-42 and 1945-47. He served as a flight surgeon in the Army Air Force during World War II.

He assumes direction of a new AMA Division which will include the Bureau of Health Education, Economic Research Department, the Councils on Industrial Health, National Defense, Medical Service, and Rural Health, and the medical representatives at Washington, D. C.

Dr. Yoder was president in 1957 of the Association of State and Territorial Health Officers and served as the group's secretary-treasurer in 1954-56. He was a member of the U. S. delegation to the World Health Organization in 1957.

Editor of Section: He is a member of the Western Interstate Commission on Higher Education, the Board of Directors of the American Cancer Society's Wyoming Division, and the Health Resources Advisory Committee of the Office of Civil and Defense Mobilization.

He also is editor of the Wyoming Section of the *Rocky Mountain Medical Journal*.

Dr. Yoder received his doctor of medicine degree from Northwestern University in 1939 and a master of public health degree from the University of California in 1948.

Dr. and Mrs. Yoder have three children.

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Book Reviews

THE DOCTORS JARED OF CONNECTICUT. Jared Eliot—Jared Potter—Jared Kirtland by Herbert Thoms, M.D. The Shoe String Press, Hamden, Connecticut. 1958. 66 pp. \$3.00.

Reviewed by DENIS S. O'CONNOR

In this small volume of 66 pages, Doctor Thoms adds the interesting story of the lives of three early practitioners of medicine in Connecticut, one of whom was a founder of the Connecticut State Medical Society to his already valuable contributions to medical history in Connecticut.

While our interest in these three early physicians stems from their impact on medicine, it is interesting to see the wide scientific interest each had and his contributions to his avocations.

Those of us who are interested in the history of medicine in Connecticut as evidenced by the permanent accretions left by individuals throughout many generations down to the present are glad to have this additional volume of historical medicine.

CLINICAL ENZYMOLOGY. Edited by Gustav J. Martin, Sc.D. Little, Brown and Company, Boston, Mass. 1954. 229 pp. \$6.00.

Reviewed by WILLIAM MENDELSON

Clinical Enzymology is an excellent symposium of contributions by several authorities to our present day knowledge of enzymes. After reading this book, the reader will realize that enzymes play a much larger role in the welfare of the human organism than acting merely as substances which are involved in the digestion of foods.

The book is well documented and indexed and the text is clearly presented in 230 pages of easily readable type. There are seven chapters: 1. Protein Biology 2. Chemistry of Enzymes 3. Biochemistry of Enzymes used Clinically 4. Parenteral Use of Enzymes in Medicine 5. Diagnostic Use of Enzymes 6. Polymerases in Biology 7. Recapitulation and Perspectives for Clinical Enzymology.

The clinician will find chapters four and five to be very interesting and informative. Promising results are noted in the treatment of many types of inflammatory conditions, refractory wounds, diseases of the respiratory tract, certain gastro intestinal disorders and some ophthalmological diseases. Case histories and colored plates are used to illustrate some exceptionally favorable responses to parenteral trypsin in the treatment of acute and chronic thrombophlebitis. Other enzymes described include chymotrypsin, streptokinase and streptodornase, hyaluronidase and cholinesterase. The author warns that there may be side reactions and also that much more investigation is needed in this field which is a new one in medicine.

The discussion of the diagnostic use of many enzymes is helpful. Among those which have been studied are amylase, trypsin, transaminase, the phosphatases, cholinesterase and several others.

The other chapters create a scientific background for a clearer understanding of chapters four and five. The physician engaged or interested in fundamental biochemical research will find a wealth of material in these pages. The con-

cepts of protein biology are interpreted according to the newest concepts of biophysics and nuclear chemistry. It is worthy of note that much of the chemistry of proteins and enzymes can be directly related to the microscopic structure of the living cell. This approach is comparable to the accent on cytology in the field of pathology. These chapters should be of much interest to the medical student and recent graduate who may be seeking problems in research. In these chapters he will find many important unsolved problems which are begging for solution. The book is also an important reference volume.

The many expressions of natural philosophy recorded by Dr. Martin are stimulating. One example is chosen—"Life, then, is an orderly manifestation of an inner disorder; and this unique quality is the foundation of the origin, evolution and cycle of the living unit."

CLINICAL EPIDEMIOLOGY. John R. Paul, M.D. University of Chicago Press, Chicago. 1958. 29 pp. \$5.00.

Reviewed by JAMES C. HART

This clear, concise and informative book, written in non-technical language, encompasses most of the concepts on epidemiology developed by the author and taught to medical students and public health students at Yale University during the past dozen years. For the first time epidemiology is treated from a medical rather than from a statistical or sociological point of view. The author's definition states that "epidemiology is concerned with the circumstances under which diseases occur, where diseases tend to flourish, and where they do not." This science deals not only with epidemics and infectious disease but also with all known blights and injuries and the setting in which they develop. The book contains twenty-one chapters divided into three parts, well organized and easily read by the student, physician, and public health worker alike. An excellent bibliography lists all of the important writings in the field of epidemiology.

The first part concerns itself with definitions and the history of epidemiology from the time of Hippocrates. It outlines important medical events and the evolution of ideas of the spread of disease as they developed from ancient Greece to the modern period.

The second part deals with the principles of epidemiology. The physician is encouraged to be a clinical epidemiologist who tries to understand disease processes by looking first at the patient, then at the patient's family, home or workshop and then at the community. Only by such consideration can the physician really understand the true ecology of the disease with which he is concerned.

In the chapter on the Concepts of Etiology: The Seed, the Soil, and the Climate, the author emphasizes the importance of increasing our knowledge of the host factors and environment in the causation of disease in order to understand the variations in response to the etiological agent. Separate chapters on Mortality Rates, Illness Rates, Charting of Data and Population Information outline, in an easily understandable way, useful statistical measurements of community illnesses and population changes. In this part host susceptibility is discussed and also serological epidemiology in which the author is a pioneer worker.

There is an excellent discussion of the geographical distribution of various diseases as well as with their behavior in different places. These effects of climate and location include not only the meteorologic changes such as temperature, mois-

ture, rainfall, etc., but also the sociologic climates representing intimate living conditions within the home or place of work.

The third part comprises separate chapters of sample diseases for epidemiological review. Foremost among these are first rate analyses of the epidemiology of rheumatic fever, infectious and serum hepatitis and poliomyelitis. In these fields the author has spent many years of investigation. An excellent chapter on arthropod-borne virus infections points out the many facets of investigation which may be utilized in seeking out the facts about the complex interrelationships necessary to maintain these virus infections. Coronary occlusion was another disease selected for review not only because it represents a chronic non-infectious disease of increasing importance but also because its obscure pathogenesis and etiology may eventually be solved by the study of its epidemiology.

The information and concepts outlined in this book are indispensable to the physician who must understand his patient's illness and explain it to the family, to the medical student or intern who is learning about disease, and to the public health official who must have a working knowledge of etiology in order that better preventive measures may be carried out in the community.

UROLOGY IN GENERAL PRACTICE. Frank Coleman Hamm, M.D.M.S. F.A.C.S.—Professor of Urology, Department of Surgery, State University of New York Downstate Medical Center; Director, University Division of Urology; Kings County Hospital; Chief Attending Urologist, The Brooklyn Hospital. Sidney E. Weinberg, M.D. F.A.C.S.—Assistant Professor of Urology; Department of Surgery, State University of New York Downstate Medical Center; Attending Urologist, University Division of Urology, Kings County Hospital; Assistant Attending Urologist, Long Island College and Maimonides Hospitals. 1958. J. B. Lippincott Company, Philadelphia, Pa.

Reviewed by H. A. LEVIN

The authors state the purpose of this book is to introduce the medical student and resident physician to the field of urology. It is well planned, starting with a working glossary of urologic terms in chapter one and continuing for 286 pages through the 19th chapter dealing with "Diseases of the Suprarenal Glands." The illustrations are generous, 285 in all, an average of one to a page and add a note of clarity to the text. Legibility is increased by the type used in the printing and the arrangement of the subject matter and illustrations.

Urology deals with diseases of the sexual and urinary organs, but to the well trained urologist its field is the whole human body and not an insulated and isolated physiological system. Differential diagnosis is stressed and makes use of history and physical findings, plus the above-mentioned profusion of illustrative charts, diagrams and photographs of clinical material, x-rays with interpretative sketches, gross and microscopic pathological specimens. From this standpoint this book is a valuable contribution.

The newest developments and thinking in physiology, metabolism, chemistry, antibiotics and endocrinology afford the reader a good working knowledge in these fields. True, they can not be exhaustively reviewed in a work of this size, so, for those desiring to go beyond the scope of this book, a reference source is found at the end of each chapter. A very excellent bibliography is provided.

TREATMENT IN INTERNAL MEDICINE. Harold Thomas Hyman, M. D. J. B. Lippincott Co., Philadelphia, Pa. 609 pp. \$12.50.

Reviewed by LOUIS H. NAHUM

In a forward Walter C. Alvarez calls the book "well organized, well written and attractively printed. . . . It should be one of the most useful books that doctors can keep within easy reach, back of their desk". In this judgment this reviewer concurs completely. Dr. Alvarez illustrates its value by quoting from a personal experience in which he cured two children infested with pin worms. The patients obtained no relief from usual procedures, but responded quickly to the drugs outlined in Dr. Hyman's book and the specific instructions detailed by the author.

There is no doubt the author has succeeded in getting out an immense book in which each section on treatment is up to date and in which there is not only ample information on the practical use of drugs recently brought out but in addition there is specific instructions in ancillary methods necessary to make drug therapy succeed.

As one reads through this compact volume one's wonder grows at the scope and thoroughness of the author's knowledge in so many diverse fields ranging from psychotherapy to infections, to metabolic disorders, to infestations, to degenerative diseases and all other branches of clinical medicine. Throughout it, shines a broad humanitarian attitude towards the sick epitomized in the concept of "caring", for as he states "Successful care of the afflicted is dependent in no small part on the patients will-to-get well and the warmth with which the physician cares for his patient".

One of many innovation that is found here is "inauguration of probatory treatment on the basis of the "educated guess", when the diagnosis remains in doubt after the initial history and physical examination, as for example in the early hours of an infection or a disturbance involving acid-base, electrolyte or water metabolism". When to continue or discontinue this probatory treatment, what alternative procedures are necessary, when to call a consultant. Actually this encyclopedic book should make consultation medicine much less necessary since in a true sense this volume is an office and bedside consultant.

The scope of this volume can be recognized when one needs specific instructions for the conduct of technical therapeutic procedures for here are given exact techniques for venostomy, hypodermoclyses, naso-gastric and intestinal intubations, lumbar puncture, lumbar sympathetic block or stellate ganglion block. Specific instructions are given in such practices as tuberculosis vaccination, or detailed isolation precautions for an infectious patient treated at home. Certainly one outcome of becoming familiar with the contents of this volume will be better medical care of the patient in his own home. This is especially becoming increasingly important now that hospitals are repositories of antibiotic resistant cocci.

Specific directions are all to be found for the conduct of nontechnical therapeutic procedures such as psychotherapy, measures for rehabilitation, postural exercises as for example in pulmonary disease, and aids for retraining following paralyzes from whatever cause.

In this book will be found rosters of commercially available therapeutic agents such as anti-infectives, anti-tensives, analgesics, ataractics with both the scientific and trade names, dosage units and package information. But the reader is not



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left to his own devices in the utilization of these agents. The author furnishes notes indicating the preferred products, untoward and toxic effects, and second choices if the patient exhibits resistance or idiosyncrasy.

There are excellent tables listing disturbances rarely encountered in routine practice; but nonetheless important occasionally especially since some of them like collagen diseases, hypersensitivities and poisonings are responsive to indicated treatment.

One very important aspect of the book provides a listing of over 100 common presenting symptoms with their management or palliation as for example somnolence, insomnia, headache, pain, tremors, convulsions, coma etc.

At the end of the book are found three supplements and an index. Supplement A and B coordinates textual material on pharmacology, therapeutics and toxicology. Supplement C is a beautiful consideration of the neglected art of prognoses. Finally there is a general index of more than 5,000 entries that includes synonyms and aponyms of clinical entities, scientific and trade names, therapeutic products and references to technical procedures mentioned in this text.

The reviewer even so, has hardly touched upon the incredible wealth of material condensed in this volume. It is most readable and "tinted with the gift of brevity". It is doubtful if there exists any physician be he generalist or specialist who can afford not to own and constantly to resort to this encyclopedic work.

The Doctor's Office

Morley M. Goldberg, M.D. announces the opening of an office for the practice of obstetrics and gynecology at 70 West Street, Danbury.

Maurice M. Hillman, M.D. announces the removal of his office from 31 Howe Street to 129 Whitney Avenue, New Haven, for the practice of pediatric allergy.

Richard C. Manjoney, M.D. and Robert J. Manjoney, M.D. announce their association in the practice of obstetrics and gynecology at 2464 East Main Street and 1275 Post Road, Fairfield.

Mary M. Miller, M.D. has joined her husband Gerhard T. Mack, M.D. in the general practice of medicine and pediatrics at 482 So. Main Street, Cheshire.

Patrick T. O'Regan, M.D. announces the opening of an office in association with Harry F. Pennington, M.D. for the practice of obstetrics and gynecology at 455 Broad Street, Meriden. A second office will be located at 199 West Main Street, Meriden.

Dimitri R. Sokhos, M.D. announces the opening of an office for the practice of medicine at 1324 Dixwell Avenue, Hamden.

B. D. Zuckerman, M.D. announces the removal of his office for the practice of ophthalmology to 255 Bradley Street, New Haven.

Around The State

New Haven County

Dr. Maurice M. Hillman has recently been appointed consultant pediatrician in pediatric allergy on the staff of St. Raphael Hospital and is currently president of the Conn. Allergy Society.

Dr. Francis H. Tonkonow has been elected diplomate of the American Board of Orthopedic Surgery, designating him as a registered specialist.

Hartford County

Myron E. Freedman of West Hartford has been appointed as director of medical education at the J. J. McCook Hospital. He will be in charge of the house staff and will also administer a teaching program for the house staff. In addition to his duties, he will continue his private practice of internal medicine and cardiology.

Peter J. Scafarello of West Hartford has been reappointed chairman of the program committee for the Connecticut Academy of General Practice. He is a past president and secretary of the Connecticut Academy of General Practice.

Middlesex County

The annual meeting of the Central Medical Association was held at Restland Farms at Northford on January 22. The new officers are Benjamin Shenker, president; Joseph Epstein, vice-president; Andrew Turano, secretary and Floyd Roos, treasurer. The speaker of the evening was Mr. Clinton Atkinson of the Drama Department at Wesleyan who spoke on "Aspects of the Current Theatre".

Marshall Smith, who was a clinical director at Connecticut State Hospital for several years, has opened an office for the practice of psychiatry, in Guilford.

James Glessner attended the meeting of the American Academy of Orthopedics in Chicago.

Fairfield County

William Kaufman of Bridgeport was elected a Fellow of Royal Society of Medicine (England).

Three medical societies within Fairfield County elected new officers for the current year recently.

The new president of the Bridgeport Medical Association is Peter Pileggi who succeeds Daniel B. Hardenbergh. President-elect is Joseph M. Adzima. Other officers are: vice president, Milton Lieberthal; treasurer, D. William Pasquariello; secretary, John C. Olsavsky.

Council members are: Dr. Hardenbergh, Dr. Olsavsky, Dr. J. Grady Booe, Dr. David T. Monahan, Dr. Colman Lopatin, Dr. Nicholas E. Creaturo, Dr. Vincent Gorman, Dr. Irving Uvitsky, Dr. Roland T. Wehger, Dr. Kurt A. Oster, Dr. Frank Northman, Dr. John Paget, Dr. George A. Buckout, Dr. Charles W. Nichols, Dr. Michael Dean, Dr. Vincent Lynch, Dr. Charles Yeager, Dr. Frank Turchik, Dr. John J. O'Looney, Dr. Pasquariello and Dr. Stephen H. Deschamps.

In Greenwich, the new president is Francis A. Read, succeeding Frederick C. Weber, Jr. Also elected were: Lillian E. Shaw, vice president and Robert Schwimmer, secretary-treasurer.

Dr. William F. Stankard is the new president of the Stamford Medical Society. He succeeds Charles A. Murphy. Other elected officers of Stamford are: Bernard M. Nemoitin, first vice president; Lindo P. DiFrancisco, second vice president; Arthur Kofler, secretary; Joseph A. Kardos, treasurer.

The annual meeting of the Fairfield County Medical Association will be held Tuesday, April 14 starting at 4 p.m. at the Stratfield Hotel, Bridgeport. Program arrangements have not been completed.

Serving on the nominating committee are: Frank H. D'Andrea, Stamford, chairman; John C. Olsavsky, Bridgeport; Eric E. Stietzel, Norwalk; Francis A. Read, Greenwich; Victor A. Machcinski, Danbury.

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OBSTETRICIAN—Gynecologist—married, veteran, 33, university trained, board eligible, desires association with group or individual within 100 miles New York City. Available August. Write R.M.D., c/o Connecticut State Medical Journal, 160 St. Ronan Street, New Haven, Connecticut.

INTERNIST, board eligible, 32 years, family, university trained, subspecialized in peripheral vascular diseases, academic credentials, at present research fellow at New York University, Medical Research Division; Goldwater Memorial Hospital N. Y. desires group or solo practice in Connecticut or Rhode Island, available July 1, 1959. Contact Kurt de Crinis, M.D., 98 Riverside Drive, New York 24, New York.

WANTED—General Practitioner under thirty-five. Suburban community on Long Island, 40 miles from New York. Doctor planning to limit his practice to specialty. Reply M.W.M. c/o Connecticut State Medical Journal, 160 St. Ronan Street, New Haven, Connecticut.

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Auxiliary Represented At Massachusetts Conference

Mrs. F. Erwin Tracy, national chairman of BULLETIN circulation, Mrs. Walter Nelson, president-elect of the Connecticut auxiliary, and Mrs. Paul W. Tisher, eastern regional chairman for BULLETIN circulation represented our Connecticut auxiliary at the mid-winter conference of the Woman's Auxiliary to the Massachusetts State Medical Society. This conference which was held Monday, January 26th, at 22 the Fenway, was highlighted by the address of Mrs. E. Arthur Underwood, president of the Woman's Auxiliary to the American Medical Association. Mrs. Underwood's talk stressed the importance of local auxiliaries as she pointed out the results of the national auxiliary depend upon them. She further emphasized the need to study all aspects of a problem before reaching a final decision.

This conference began at ten o'clock in the morning. At noon a delicious buffet luncheon was served after which the meeting resumed.

A hobby show of members work was an attractive sidelight.

Fairfield County will take over the Klein Memorial Auditorium on April 18th to present Mimi Bonzell.

Litchfield County is stressing three projects for the year: increased membership, para-medical careers recruitment, and A.M.E.F.

The Mental Health Committee of the Hartford County Auxiliary had Mr. William N. MacKay, director of probation of the Juvenile Court, for the State of Connecticut, speak to the entire membership on Tuesday, February 10th on "Delinquency and Mental Health."

New London County Auxiliary members have recently helped to redecorate and refurnish a man's admittance ward at the Norwich State Hospital.

Middlesex County has reached their quota for TODAY'S HEALTH.

Windham County will have a dinner dance on April 4th at the Lighthouse Inn as a fund raising project.

Our President Returns

Doctor and Mrs. Charles M. Gratz have returned from an extended trip to Haiti and Panama. They are temporarily living at 27 East 79th Street, New York City until their new Connecticut home is ready.

AMA Publishes 112-Year Digest

Publication of a digest of official actions of the American Medical Association's House of Delegates for a 112-year period, from 1846 through 1958, has been announced by the AMA.

First edition of the publication, which will be available soon, will contain more than 300 broad title classifications with complete cross references of all the House of Delegates actions.

The book will be a composite of all actions by subject classification, showing clearly the most recent actions and current policy.

Special pre-publication price is \$5. A copy may be reserved now by writing: Circulation and Records Dept., American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

AMA Mediolegal Symposiums

The American Medical Association will again sponsor three regional medicolegal meetings during March and April of this year. They will be held in Washington, D. C. on March 20-21; in Cleveland, Ohio on April 3-4; and in Salt Lake City, Utah on April 17-18. The meetings this year will begin with registration at 12:00 on the first day which in each instance will be a Friday. The Friday afternoon program and the full day program on Saturday will both be concluded by 4:30 P.M.

Special Notices

CATHOLIC PHYSICIANS RETREAT

March 17th-19th

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The Institute of Ophthalmology of the Americas, New York Eye and Ear Infirmary, will offer the following post-graduate Courses:

1) Ocular Surgery, May 18-29, 1959. It will include Cataracts, Keratectomies and Keratoplasties, Pterygium, Lacrimal Sac, Retinal Detachment, Muscles including Ptosis, Glaucoma, Enucleation and Evisceration, and Orbitotomy. Registration is limited. Preference will be given ophthalmologists taking the entire Course. If places are available, doctors may register for individual parts.

2) Histopathology of the Eye, May 18-23, 1959. Limited registration.

3) Review Course covering Practical Aspects in Perimetry, May 18, 20, 22, 1959. Limited Registration.

For further information, please write:

Mrs. Tamar Weber, Registrar
Institute of Ophthalmology of the Americas
New York Eye and Ear Infirmary
218 Second Avenue
New York 3, N. Y.

SYMPOSIUM TO BE HELD IN NEW ENGLAND

A two day symposium on "The Prevention and Treatment of Athletic Injuries" will be held on Monday and Tuesday, August 17 and 18, under the joint sponsorship of the Department of Physical Education and the Health Service of the University of Rhode Island.

The symposium, the first of its kind to be held on a major scale in New England, is designed primarily for all team physicians, athletic trainers and coaches of colleges, universities and public, private and parochial secondary schools in the New England, New York and New Jersey areas.

Dr. A. A. Savastano, Providence Orthopedic Surgeon, will serve as chairman of the medical section. The program will be under the direction of Professor Fred D. Tootell, Director of the Department of Physical Education for Men, and Dr. S. J. P. Turco, Director of the Health Service at the University.

POST-GRADUATE COURSES

The following Post-Graduate Courses will be offered by the Institute of Ophthalmology of the Americas:

(1) Histopathology of the Eye, May 18-23, 1959.

(2) Review Course Covering Practical Aspects in Perimetry, given evenings, May 20-22, 1959.

Further information regarding registration and fees may be

obtained by writing to: Mrs. Tamar Weber, Registrar, Institute of Ophthalmology of the Americas, New York Eye & Ear Infirmary, 218 Second Avenue, New York 3, N. Y.

THE SECOND INTERNATIONAL SYMPOSIUM ON MYASTHENIA GRAVIS

held under the joint auspices of

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The National Institute of Neurological

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April 18 and 19, 1959 — Los Angeles, California

The Statler-Hilton Hotel

Connecticut Chapter of The American Physical Therapy Association announces educational session for professional people, at Newington Hospital for Crippled Children, Newington, Connecticut, on April 11th from 9:00 A.M. to 4:00 P.M.

Subjects, 1. Arthritis.

2. Administration and Supervision problems of Physical Therapy Departments.

Register by April 1st. Send fee, name and address, and professional status to Mrs. Roberta Werner, P. T. Department, Newington Hospital for Crippled Children, Newington 11, Connecticut.

NEW YORK PROCTOLOGIC SOCIETY

The annual banquet meeting will be held at the N.Y.U. Club, 123 West 43rd Street, New York City, on Thursday, April 16, 1959. Cocktails at 6 P.M. Dinner at 6:30 P.M.

The speaker will be Dr. Rupert B. Turnbull, Surgeon Cleveland Clinic, by invitation, on the "Newer Surgical Procedures in Ulcerative Colitis".

This meeting is open to interested physicians; reservations may be made through the secretary, Dr. Norman L. Freund, 163 Ocean Avenue, Brooklyn 25, New York. Tariff \$10.

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Obituary

MARION EDITH HOWARD, M.D.

1899-1959

It is with a profound sense of sorrow that we note the passing of Marion Edith Howard, M.D., formerly of New Haven. Dr. Howard died in her sleep on January 5, 1959, in Cali, Columbia, South America.

Dr. Howard was born in New York City, September 26, 1899, the daughter of Captain and Mrs. Gilmore Howard, both natives of England. She received her B.A. degree from Barnard College, Columbia University, in 1926, and her M.D. at Johns Hopkins University School of Medicine in 1931. She served her internship and residency at New Haven Hospital 1932-1934. She was sterling fellow of medicine 1934-1935, research assistant in medicine 1935-1936, and instructor in medicine 1936-1941. She also served as associate physician at New Haven Dispensary at New Haven Hospital, and associate clinical professor, Department of Internal Medicine in the Yale Medical School.

Dr. Howard received widespread recognition as the first physician to administer penicillin in this country. In April, 1942, under orders of Dr. Francis G. Blake, she administered penicillin to a patient dying of an overwhelming streptococcus infection. As a result, the patient made a dramatic recovery and is still alive.

She married Dr. Ashley Oughterson in 1941 and practiced in New Haven until 1956, when she and Dr. Oughterson went to Cali, Columbia, on a mission for the Rockefeller Foundation. Dr. Oughterson was killed in a plane crash in Columbia in November, 1956. After a brief visit to this country, Dr. Howard returned to Cali as visiting professor of medicine at the Universidad del Valle, where she was working at the time of her death.

Dr. Howard was highly regarded as a diagnostician. Her specialty was the management of communicable diseases and it was particularly in this field that she was working in Columbia.

Her passing will be greatly regretted by her many friends and associates at the Yale University School of Medicine and at Grace-New Haven Community Hospital.

FLORENCE KELLER, M.D.

In Memoriam

QUINN, RAYMOND J.—Waterbury; University of Maryland School of Medicine and College of Physicians and Surgeons, 1913; practiced more than 40 years in Washington Hill area of Waterbury; served as city bacteriologist and city physician for the Welfare Department; during World War I he served with the Columbia Medical Unit under command of the late Dr. Frank Lahey, founder of the Lahey Clinic; he was staff pediatrician at St. Mary's Hospital, where he served a term as chief of staff; a member of the Board of Directors of the Diocesan Bureau of Social Service, he also served on the State Fund Committee of the American Legion; died January 13 at St. Mary's Hospital, aged 67.

VAIL, GEORGE F.—Hartford; University of Pennsylvania Medical School, 1902; began general practice in Hartford following graduation from medical school; in 1907 interrupted his practice to pursue advanced studies in Europe and upon return to Hartford specialized in otolaryngology; served on the staffs of the Hartford McCook Memorial, and St. Francis hospitals; retired a year ago after 50 years of study and practice; died January 8 at Hartford Hospital, aged 80.

Malpractice

Sir Ernest Rock Carling, president of Britain's Medical Protection Society Ltd., reports that "probably as high as 70 per cent" of the malpractice suits in his country arise out of incidents in hospitals. This corresponds with situation in U. S. where an AMA survey showed almost 70 per cent of malpractice suits stem from hospital occurrences.

Seat Belts

Safety belts in automobiles could save at least 19,000 lives in the U. S. each year and reduce injuries by 50 per cent, a Cornell University research group estimates.

Doctors Popular

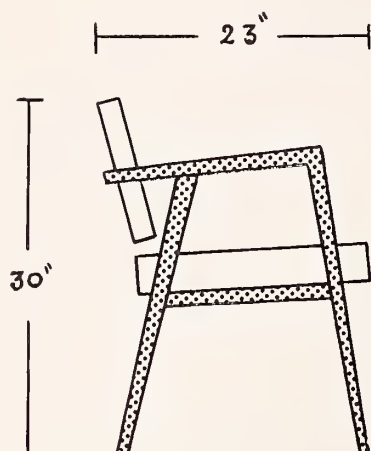
A survey by Elmo Roper on public's attitudes toward hospitals in New York City shows doctors received the highest rating of all personnel serving in hospitals.

Heart

Persons with heart and blood vessel disease should be vaccinated against influenza, according to joint statement by American Heart Association and U. S. Public Health Service. Dangers of influenza are greater for patients with heart or lung disease than for others.

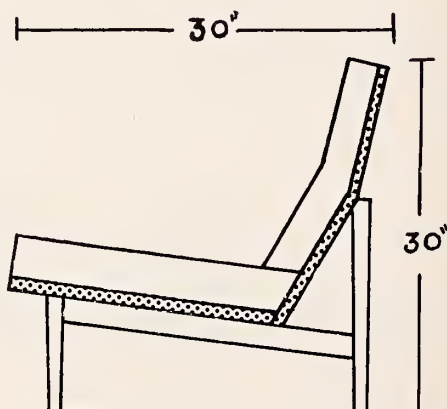
Gout

Even teetotalers and meager eaters may fall victim to gout, although an acute attack of gout may be triggered by overindulgence in food or drink, according to Arthritis and Rheumatism Foundation.



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PROGRAM
CONNECTICUT CANCER CONFERENCE FOR PHYSICIANS

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Wednesday, March 18, 1959 12:45 to 4:30 P.M.

Presiding: Gilbert W. Heublein, M.D., Hartford

12:45 REGISTRATION

1:00 CALL TO ORDER

Donald A. Bristoll, M.D., President, American Cancer Society, Connecticut Division

1:05 EARLY CANCER DETECTION—A Symposium accenting techniques of early diagnosis found most effective in daily practice

Moderator: David Lyall, M.D., New York City

DETECTION OF CANCER OF THE CHEST AND BREAST BY THE PRIVATE PHYSICIAN

Phillips Frohman, M.D., Washington, D. C., Generalist

THE ROLE OF THE LABORATORY IN THE CANCER DETECTION PROGRAM

Genevieve M. Bader, M.D., New York City, Associate Professor of Preventive Medicine, Memorial Center for Cancer and Allied Diseases

RADIOLOGIC ASPECTS OF EARLY DIAGNOSIS OF PULMONARY MALIGNANCY AND ITS DIFFERENTIAL

Benjamin Felson, M.D., Professor of Radiology and Director of the Radiologic Department, Cincinnati General Hospital

THE CANCER DETECTION CLINIC—NEW STATISTICAL EVALUATIONS

Albert Sullivan, M.D., Assistant Professor of Surgery, University of Minnesota Medical School

SURGICAL ASPECTS OF CANCER DETECTION

David Lyall, M.D., Professor of Clinical Surgery, New York University Medical School; Director of Tumor Service, Post-Graduate Medical School, Bellevue Medical Center

MILLION VOLT X-RAY DIAGNOSIS—A NEW DIAGNOSTIC MODALITY

William Tuddenham, M.D., Radiologist, University of Pennsylvania School of Medicine

2:30 INTERMISSION

3:00 CONTINUATION OF SYMPOSIUM

3:40 OPEN FORUM—Written questions are invited. Question cards may be obtained at the registration desk

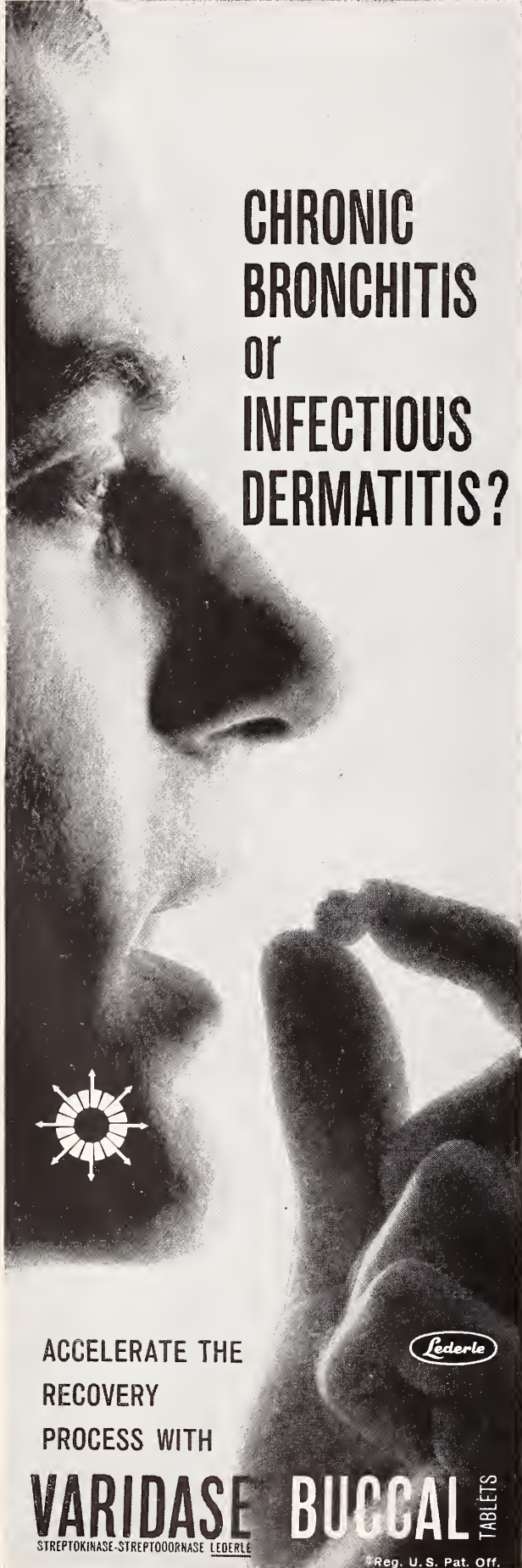
4:20 SUMMARY

Gilbert W. Heublein, M.D., Chairman, Connecticut Cancer Conference for Physicians

4:30 ADJOURNMENT

Postgraduate Credit: Members of the Connecticut Academy of General Practice may receive postgraduate credit for attending this conference

Sponsored by: Connecticut State Medical Society; American Cancer Society, Connecticut Division; Connecticut State Department of Health; Connecticut Academy of General Practice.



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"If I give money to the Connecticut Chapter of the ARF, in what way will the arthritics of my community benefit?" This question has been asked and will be asked again.

First of all, a percentage of all money contributed goes to the National ARF where it is reallocated for basic research in the way of fellowships and grants. Research, of course, by finding the cause and cure will benefit all, rich and poor, urban and rural.

Part of the remaining monies collected in the state, helps support a program of clinic improvement and expansion. It is estimated that there are approximately 200,000 victims of rheumatic disease in Connecticut. We now have six active Arthritis Clinics, more are needed and in time we hope to have a clinic center in every hospital in the state.

Bedridden or homebound patients requiring physical therapy treatment, and those for whom travel would invalidate the benefits of such treatment, are best served by therapy in the home. To meet this problem, we have in operation four Mobile Physical Therapy Units.

Research at Yale University School of Medicine on what is known as the "sheep cell test" for the detection of Rheumatoid Arthritis, is supported by the Connecticut Chapter. This test is available to all physicians in the state.

Another research project into the cause of joint inflammation in Rheumatoid Arthritis is being conducted at Norwalk Hospital; and still another full grant has been made to Hartford Hospital for a film research project on joint motion.

A special grant was made to Yale University School of Medicine to support summer laboratory jobs for two high school students interested in the field of science. This was done to stimulate their interest in research.

Grants have been made to: the Hartford Rehabilitation Center for the salary of a physical therapist to treat arthritic patients; to Stamford Rehabilitation Center for arthritic treatment; and the Chapter helped establish, and purchased equipment for, the Rehabilitation Center at Middlesex Hospital. The Foundation is referring arthritic patients to the Bridgeport Rehabilitation Center and treatment is being paid for by the Connecticut Chapter.

A monthly Bulletin on Rheumatic Diseases is mailed monthly to 838 Connecticut physicians and all hospital Superintendents. The official Journal of the American Rheumatism Association *Arthritis and Rheumatism* has been offered to all hospitals in the state who have interns or resident doctors on their staff.

CONNECTICUT MEDICINE



VOLUME 23

APRIL, 1959

NUMBER 4

Myasthenia Gravis

GILBERT H. GLASER, M.D.

New Haven

THE disease now known as myasthenia gravis was first described in 1672 by Thomas Willis¹ who became aware of its main symptoms: weakness, fatigability and rapid exhaustion of voluntary muscle during activity and return of strength, or at least partial recovery, after rest. He reported: "At this time I have under my charge a prudent and honest woman, who for many years hath been obnoxious to this sort of spurious palsy, not only in her numbers, but also in her tongue; she for some time can speak freely and readily enough, but after she has spoke long, or hastily or eagerly, she is not able to speak a word, but becomes as mute as a fish, nor can she recover the use of her voice under an hour or two". Some two hundred years went by before further studies were made of this disease. During the last quarter of the nineteenth century various investigators, working particularly in Germany and England, further described the clinical picture and differentiated it from organic disease of the central nervous system, particularly of the brain stem. Erb in 1879,² and Goldflam in 1893,³ reviewed the disorder comprehensively, and occasionally the eponym "Erb-Goldflam Disease" is given for myasthenia gravis. Jolly, in 1895,⁴ first used the term "myasthenia gravis pseudoparalytica" and described the gradually decreasing muscle responses upon repeated stimulation with faradic current, the Jolly test. During the first portion of the twentieth century little further was added except for occa-

sional case reports; however, with the advent in 1930⁵ of treatment with ephedrine, and in 1934⁶ the really effective therapy with prostigmine, it became possible to study the disease in even greater detail. Many more patients survived and the clinical picture became delineated more thoroughly on the basis of relatively long-term follow-up studies of at least 1,000 or more cases accumulated in certain clinics in the United States and abroad.⁷

Clinical features: The overall incidence of this disease still has to be determined. It has been estimated that approximately 10,000 cases exist in the United States and that probably there are one or two unrecognized cases for each one diagnosed, bringing the total to about 25,000. The disease may be present at birth and may appear as late as the ninth decade. In general, the sex distribution is about 60 per cent female to 40 per cent male. However, there are some possibly significant variations with regard to age of onset. With the onset in the juvenile years up to the age of puberty, there is about an equal incidence between the sexes. However, with late adolescent or adult years of onset the female tends to develop myasthenia in the earlier decades of life (about 60 per cent before the age of 30), whereas the male tends to develop the disease in the later decades (about 30 per cent before the age of 30).

The symptoms of easy fatigability and progressive weakness of striated muscle may affect any of the muscles and may be mild or severe, localized or generalized. Disturbances involving the extraocu-

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lar muscles and the extremities are most common. Initially, weakness of extraocular muscles with diplopia and ptosis may appear. The pupillary reactions are usually normal. Signs and symptoms involving the bulbar muscles occur as well as facial involvement. Many of the patients develop a "myasthenic facies": the facial muscles relax, the nasolabial folds are flattened, the mouth tends to hang open, the lips appear to be full and the underlip is everted. The patient has difficulty in smiling and whistling, and in attempting to smile the appearance of "snarling" occurs. There may be progressive difficulty in chewing, swallowing and speaking. The neck muscles may be so severely weakened that the patient may have to support his head with his hands, and these changes may cause occasional aching pains in the posterior cervical region. Breathing difficulty may ensue due to weakness of the diaphragm, intercostal and accessory muscles. Weakness of the extremities interferes with such activities as walking and climbing. When the lower back muscles have relatively severe weakness, low back pain may develop. Sensory symptoms may occur such as pain behind the eye, numbness and tingling of the face, nose, tongue or extremities but there are no objective sensory deficits. Characteristically, the patient may feel well in the morning but worsen as the day progresses. Some patients, however, are so weak in the morning they have difficulty in arising.

There are no significant physical findings aside from the demonstrations of weakness. In a small percentage of patients, however, muscular atrophy is present particularly of the quadriceps, and although it may appear as early as six months after the onset of the disease, it is usually a late occurrence. The deep reflexes are normal at first but may become slightly hyperactive later when hypotonia may appear. Repetitive stimulation may eventually cause an elicited reflex to disappear, only to recur later after rest. There are no fasciculations or fibrillations.

The clinical course of the disease may be extremely variable. The onset is more usually gradual but it may be abrupt and the course fulminating. Usually the cranial muscles are first affected, particularly the ocular, and if this situation remains for about two years, the disease probably will be fixed in this area and be mild. Spontaneous remissions may occur, especially in the first two years, in up to 30 per cent of patients, and may last as long as five years. Pregnancy may improve the course of myasthenia gravis in a favorable way in about one third of the cases, while in other patients it may cause an exacerbation. Occasionally, in menstruating females, myasthenic symptoms may be exacerbated in the immediate premenstrual phase. Many

patients have exacerbations in association with upper respiratory infections. The first two years of the disease are usually the most difficult for each patient. Under adequate therapy, 50 to 60 per cent of the patients are improved and at least 15 per cent may go into a complete remission. About 20 per cent of the patients are unchanged or worse; the mortality rate is still about 20 per cent.

The clinical entity of neonatal myasthenia is unusual and of great significance. This disorder appears in infants born of myasthenic mothers. Actually, there may be recognition of a delay of quickening, and reduction in amount of fetal activity in the last weeks of pregnancy. The child, when born, is feeble, has a weak cry, poor sucking and swallowing responses, a flaccid facies, and often bilateral ptosis. Under proper treatment the condition may be relieved in two to six weeks.

Pathology: The pathology of myasthenia gravis has been studied extensively.^{7, 8, 9} There are no consistent, definite or characteristic pathologic changes in the central nervous system or peripheral nerves. Lesions in striated muscle are variable. In many instances a non-specific infiltration of small mononuclear cells and lymphocytes occurs in perivascular regions in striated muscles, the "lymphorrhages". These are present in about 50 per cent of patients but are not correlated with the intensity of the disease. Other more sporadic changes appear, such as swelling, necrosis with reactive myositis, loss of fiber striations and occasional eosinophilia. Also, there are no specific alterations in the intramuscular nerve endings or at the neuromuscular junctional regions, even with histochemical stains of cholinesterase. Myocardial necrosis and reactive myocarditis occur in as yet undetermined number of patients and may account for such occasional symptoms such as cardiac arrhythmias. Lesions of the thymus gland are particularly common in patients with myasthenia gravis. These range from hyperplasia to tumor. At least 15 per cent of the cases have tumors some of which are malignant. It has been estimated that about 70 per cent of the patients have hyperplasia.

In most instances there are no alterations in the general bodily chemical functions. Some patients have a mild creatinuria with impairment of creatine tolerance, but this occurs mainly when there is some muscular atrophy. The blood sugar usually is normal. The peculiar occurrence of abnormalities of the thymus gland in these patients is not the only association with an endocrine or possibly metabolic disorder. As mentioned above, there are associations with pregnancy and menstruation, and modifications of the clinical course have been observed in relation to associated thyroid, adrenal or pituitary dysfunction. A number of patients (up to five

per cent in some series) have an associated hyperthyroidism and myasthenia gravis¹⁰ and occasionally, but not always, there is an inverse relationship between the intensities of the two disorders. Most patients with myasthenia gravis have normal thyroid function, however. Addison's disease and myasthenia gravis have been reported together but the association is probably coincidental. The administration of ACTH and cortisone has been found to worsen a myasthenic state, and remission has been described following withdrawal of the hormones. At the present time it may be stated that there appears to be, in some cases, association between certain endocrine dysfunctions and the activity of myasthenia gravis, but that the significance of these relationships remains unclear.

Remarks concerning the pathogenesis and pathophysiology of myasthenia gravis:^{7,11,12} The disturbance in myasthenia gravis demands a progressive type of neuromuscular conduction block, which seems to require a certain number of impulses to produce it, and which is maintained by the continuance of nerve impulse action. There appears to be a defect in the mediation of the nerve impulse across the neuromuscular synaptic junction. The electromyogram in myasthenia gravis shows the normal synchronous burst of potentials of many motor units, with the number of units and the intensity of the potentials rapidly declining to a relatively steady level of discharge and then a slower decline. This is followed by a dropping out of motor units one by one, the heights of the spikes fluctuating a great deal, indicating that the number of the fibers responding to each nerve impulse is varying. The failure is probably independent at each of the nerve endings. After rest the units may begin to recover their functions. This neuromuscular block may have several possible mechanisms occurring separately or perhaps in association: (1) There may be an excessive concentration of cholinesterase removing the transmitter substance, acetylcholine, in excessively rapid fashion following its release from nerve endings. This has not been observed in myasthenia gravis histochemically. The cholinesterase levels are not abnormally high in the serum or red cells, even in myasthenic crisis. Also, intra-arterial acetylcholine readily produces muscular contraction. (2) A decrease in acetylcholine synthesis or release. This would not appear to be the case, since anti-cholinesterase substances are effective in the reversal of this block, and there is apparently adequate acetylcholine present, when these substances are administered, to produce significant contractions. (3) A competition block such as might be produced by a circulating curariform substance. Many of the clinical features of myasthenia gravis are similar to a curare effect. In

this type of block there would be inhibition of the depolarizing action of the transmitter on the endplate. The block occurs without any change in the resting potential of the muscle membrane and may be reversed by acetylcholine or anti-cholinesterase compounds given in effective dosages. There would be postulated a competition of this circulating substance with acetylcholine for protein receptor sites at the endplate. Other evidence that a circulating substance is involved is, of course, implicit in the occurrence of neonatal or congenital myasthenia. Serum from the exercised extremities of myasthenic patients has not produced any significant changes in various types of experimental muscle preparations. There are but slight differences between the curare effect and that seen in myasthenia gravis. However, recently, the concept of (4) depolarization or cholinergic block has been developed. In this, abnormally prolonged depolarization occurs in the region of the endplates, producing inexcitability. It may be produced by excessive concentrations of acetylcholine, by anti-cholinesterase compounds in high dosage, and by decamethonium substances. In myasthenia gravis it is felt that perhaps the response of the endplates is altered, with decreased sensitivity to acetylcholine.¹¹ The administration of decamethonium to patients with myasthenia gravis produces failure in the most asthenic muscles, and the clinically normal muscles are more resistant to this depolarizing action. In myasthenia gravis it has been suggested that the muscles become more resistant to their own acetylcholine until finally the threshold is raised to such a degree that a block by competitive inhibition results.

There have been a number of interesting pharmacological studies in myasthenic patients that relate to pathogenesis. In patients with myasthenia gravis, intra-arterial injection of prostigmine or Tensilon produces an increase in the amplitude of the muscle action potential evoked by nerve stimulation, followed then by depression with larger doses. Curare (or d-tubocurarine) produces greater depression of evoked potentials in myasthenia patients than in normal subjects, and more marked inhibition of the depressant or depolarizing action of acetylcholine. It is possible that the site of d-tubocurarine block may be proximal to that of myasthenic block.

Diagnosis: The diagnosis of myasthenia gravis is usually made by careful history, examination demonstrating the characteristic weakness and pharmacological tests. An x-ray of the chest should be taken on all patients in order to show enlargement of the thymus gland in the mediastinum. Special lateral tomographic x-rays may be helpful.

In 85 to 90 per cent of cases the diagnosis may be established with certainty by pharmacological tests

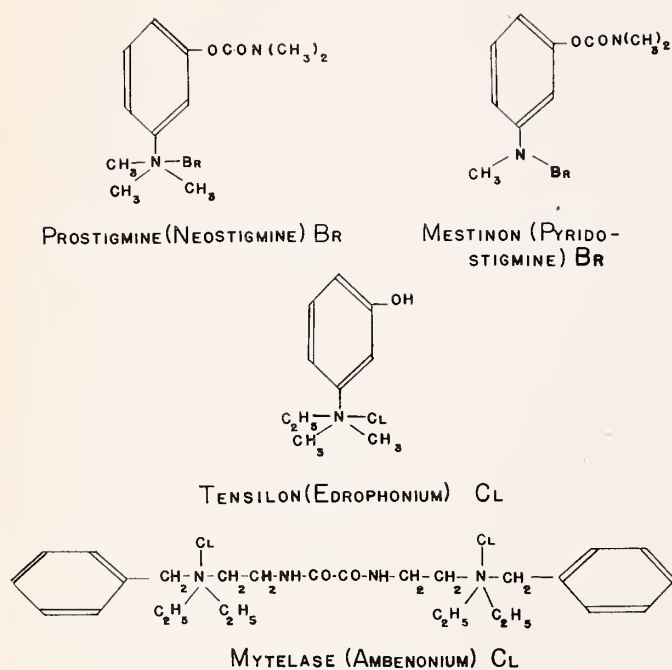


FIGURE 1.

Anticholinesterase drugs used in Myasthenia Gravis.

using drugs which, in the doses administered, improve the myasthenic muscle but have no effect on normal muscle. Drugs are used which stimulate the neuromuscular junction because of their anti-cholinesterase action (Figure 1). It may be worthwhile first to perform a placebo test with water, atropine or nicotinic acid. The positive response to the actual tests is the appearance of objective improvement in the involved weakened muscles.

(1) The prostigmine test was the first used.¹² The most effective way to perform this test is to administer prostigmine methylsulfate 1.5 milligram intramuscularly (3 cc. of a solution of 1:2,000 dilution) along with 0.6 milligram of atropine sulfate to limit the muscarinic side effects of the prostigmine (nausea, sweating, cramps and diarrhea). The patient is examined at five and 10 minute intervals during the following hour during which time the improvement should occur in a positive test. An intravenous test may be performed with 0.5 milligram of prostigmine methylsulfate, with the response occurring within one or two minutes; however, this test may produce false negatives because of the relatively small amount of drug used, and false positives in sensitive individuals, with the drug producing over-depolarization weakness. Also, prostigmine bromide, 15 milligrams, may be administered orally in a therapeutic trial of one or two tablets, three to four times daily with observation periods of several days.

(2) Tensilon test (Edrophonium chloride): This phenolic quaternary ammonium salt is a rapidly action anti-cholinesterase and is now used as a standard test for myasthenia gravis.¹⁴ In normal

individuals the drug produces no change in muscle strength, but some cholinergic side reactions such as sweating, salivation, and cramps. In addition, fasciculations almost always occur. The drug is available in solution in concentration of 10 milligrams per cc. The test is performed by preparing 1.0 cc. in a tuberculin syringe and first injecting 0.2 cc. intravenously in 15 seconds. If no reaction occurs after 30 seconds, the remaining 0.8 cc. is injected. If a cholinergic reaction occurs after the injection of 0.2 cc. the test should be stopped and atropine sulfate one milligram administered. The test may be repeated after one-half to one hour using 0.5 or 1.0 cc. The response to Tensilon usually occurs within one minute, with definite relief of muscular weakness in a positive result. The reaction is over within 10 minutes. No fasciculations occur in myasthenic patients. Tensilon also may be administered intramuscularly, 1.0 cc., with a reaction in two to 10 minutes.

Both prostigmine or Tensilon may be combined with a barium swallow under fluoroscopic observation in order to evaluate cases of dysphagia. When x-rays are to be taken prostigmine should be used in dosage of 1.5 milligrams intramuscularly. When fluoroscopy is to be performed the more rapidly acting intravenous Tensilon will be more effective.

Certain drugs which inhibit or depress the activity at the neuromuscular junction have been used for diagnosis in myasthenia gravis; however, these drugs are potentially dangerous and may precipitate severe respiratory weakness. Quinine, curare and similar drugs are in this category. Only in rare instances should these substances be used, when no other way is available to confirm the diagnosis.

Both mechanical (ergographic) and electrical tests of muscle function may be useful in demonstrating the progressive weakness of muscular contraction or decrease in the amplitudes of successive muscle potentials upon repetitive stimulation of nerve. These methods may be utilized as objective and quantitative measurements associated with the pharmacological stimulating tests previously described.

Differential diagnosis: In the differential diagnosis of myasthenia gravis all other diseases producing weakness in cranial and appendicular muscles should be considered. The list is extensive and should include poliomyelitis, especially the bulbar type, amyotrophic lateral sclerosis, pseudobulbar palsy, infectious cranial neuropathy, infectious polyneuritis (Guillain-Barré syndrome), progressive nuclear ophthalmoplegia, progressive muscular dystrophy, (generalized and especially that localized to the ocular muscles), multiple sclerosis, familial periodic paralysis, hyperthyroid myopathy,

polymyositis, carcinomatous myopathy especially that associated with a pseudomyasthenia syndrome, hypoadrenalism, potassium depletion and psycho-neurosis with conversion reaction involving muscle strength.

Treatment: Once the diagnosis of myasthenia gravis has been established, treatment should be considered with one of the anti-cholinesterase drugs (Figure 1). The desired effect is to reduce the block at the neuromuscular junction and improve muscular function. However, the drugs may not improve the patient to the extent of that which may occur in a spontaneous remission. The dosage requirement should be tailor-made for each individual patient, since the dose itself may vary from day to day in the same patient, and there may be wide variation between patients.

From 1936 until recently the cornerstone of drug therapy has been the use of prostigmine (neostigmine). This drug, although mainly an anti-cholinesterase, in addition has an anti-curare effect at the neuromuscular junction. It has been very effective in treating patients with myasthenia gravis, particularly those with milder involvement requiring relatively small doses. Patients with myasthenia gravis have or develop a tolerance for the effects of prostigmine. However, habituation does not occur, and tolerance often diminishes when patients enter remission. Prostigmine has a relatively short duration of action, in some instances not even an hour, and in severe cases this is a distinct disadvantage. Increasing the dose and frequency of administration may produce significant cholinergic side effects, such as epigastric distress, salivation, sweating, lacrimation, nausea, a sense of constriction in the chest, abdominal cramps, diarrhea and fasciculation, particularly around the mouth. Over-dosage may produce a cholinergic depolarization block with severe generalized muscular weakness. The therapeutic dose may vary from 15 to 30 milligrams three or four times a day orally to as much as 60 milligrams every three hours. Some patients have required as many as 60 to 100 fifteen milligram tablets per day. The dose requirement may be altered by factors such as upper respiratory infections, pregnancy, menstrual periods or emotional stress. Each patient must learn to adjust his own medication, correlating his experience with careful follow-up by the physician. When swallowing difficulty is severe, or the patient may be having difficulty in coughing, it may be necessary to administer the prostigmine parentally, either intramuscularly or subcutaneously. Occasionally, atropine administration may be necessary to decrease the side effects of prostigmine.

Recently, there has been a search for new anti-cholinesterase drugs in order to overcome some of

the disadvantages of prostigmine. Mestinon (pyridostigmine) bromide has been found to be an effective and extremely useful anti-cholinesterase, actually preferred now in many clinics over prostigmine.^{7,15} This drug has from one-sixth to one-eighth the side effects of prostigmine in experimental animals. Its anti-curare activity is much less than prostigmine, and comparatively its anti-cholinesterase activity is less. However, the effective single dose of 60 milligrams correlates with the 15 milligrams of prostigmine and has less muscarinic side effects. The duration of action of Mestinon is slightly longer than that of prostigmine and therefore the drug is more useful for night administration. It is more effective than prostigmine in the relief of myasthenia affecting the muscles innervated by the cranial nerves. Long-acting tablets of Mestinon are now available, having an effect two and one-half times as long as the regular tablet (up to at least eight or more hours).¹⁵

Another new anti-cholinesterase, Mytelase (amibenonium) has a limited usefulness in some patients.^{7,17} Its single dose is five milligrams and the duration of action is similar to that of Mestinon. This drug has been preferred by less patients than the other anti-cholinesterases. In some patients the newer drugs have been more useful because of their lesser side reactions, permitting higher dosage than can be used with prostigmine. At the present time however, there are no drugs that will be effective if the patient becomes resistant to these anti-cholinesterase drugs. Further chemical alterations are being made in the molecules of prostigmine and mestinon and recently "bis" forms are being investigated.⁷ Both bis-prostigmine and bis-mestinon have a longer action than the parent drug, but difficulties of cumulative action and over-dosage still are limiting the usefulness of these preparations. These latter problems eventually caused the discontinuation of the use of the alkylphosphates, diisopropyl-fluorophosphate (DFP), tetra-ethyl-pyrophosphate (TEPP) and octamethyl-pyrophosphoramidate (OMPA). With each, the close range between therapeutic and toxic doses made these drugs hard to control, and the occurrence of cholinergic crises eventually led to their discontinuation. Occasionally, other drugs may be used as adjuvants to the anti-cholinesterases but their usefulness is quite limited and they really are not necessary if the standard anti-cholinesterases are adjusted properly. These have included ephedrine, 25 milligrams three times daily; guanidine hydrochloride, 25 milligrams to 50 milligrams per kilogram of body weight in three doses daily; potassium chloride 1.0 to 3.0 grams daily in divided doses.

Certain drugs are contra-indicated in the management of these patients and great care should be

taken when anesthetics are necessary. The dangerous drugs include curare, quinine, quinidine, morphine and anesthetics such as chloroform and ether. Adrenocorticotrophic hormone and cortisone should be used with great care since myasthenia may become worse during the administration of these hormones. Sedatives and respiratory depressants in general should be used in very small dosage.

Many patients require mechanical aids for the difficulties in the ocular muscles: lid crutches may be necessary to take care of ptosis which does not respond to drug medication, and eye patches or ground glass lenses (alternated either eye to prevent amblyopia) may limit the effects of diplopia. Certain patients who have difficulty in chewing and swallowing require special preparation of foods such as homogenization, and in severe instances, nasogastric intubation. Mechanical suction may become necessary to take care of accumulated secretions in the nasopharynx.

Thymectomy:^{7, 18, 19} When it has been determined that a patient has a thymoma, thymectomy is indicated since at least 25 per cent of these tumors are potentially malignant. The myasthenia gravis postoperatively in these patients has often remained unchanged, and in some instances improved. Patients with a thymoma usually have severe myasthenia and a higher mortality rate.

The question of thymectomy as a therapy for myasthenia gravis in patients who do not have a thymoma is still under discussion. Recent statistical evaluations have indicated that thymectomy may be of significant benefit in the young female under 30 years of age who has had the disease for less than five years, does not have a thymoma and is having difficulty with medical management. The factor of spontaneous remissions has to be fitted into these evaluations. Also, it is known that some patients may have a spontaneous remission after a serious non-specific traumatic event. It is felt that patients with only ocular involvement should not be considered for thymectomy. It should be recalled that spontaneous remissions occur and may last as long as five years. In some series remissions following thymectomy have been longer than this, over five years and occasionally complete.

Radiotherapy to the thymus has been administered to patients with and without thymoma with variable results. It may be useful in preventing a more severe myasthenia in patients who may not be eligible for thymectomy; such as male patients and elderly females. In patients without thymomas, however, the effect of radiotherapy does not appear to be any different from anti-cholinesterase drug management.

Crisis: Relatively rapid or sudden deterioration in certain patients may occur and has been termed

crisis. Severe depression of breathing due to progressive paralysis of the diaphragm and the intercostal muscles, associated with obstruction of airway because of paralysis of laryngeal and pharyngeal muscles, may lead to a respiratory death. During the development of myasthenic crisis the patient may become refractory to anti-cholinesterase drug and increasing the dosage will have no effect. Excessive secretions associated with an inability to expel these may lead to pulmonary atelectasis and pneumonia.

The actual mechanism producing crisis is not understood. The crisis most frequently occurs in connections with severe upper respiratory infections, physical and even emotional trauma. There may be an altered response at the neuromuscular junction, the anti-cholinesterase drugs becoming unable to overcome the block. Also, over-depolarization block may occur and lead to further weakness, cholinergic crisis. The difference between these two crises, myasthenic and cholinergic, may be clarified by the administration of Tensilon.¹³ If the patient is improved the crisis is myasthenic. Other responses to the test, equivocal, or exacerbation of symptoms with fasciculations indicate cholinergic crisis. Three features of drug action in cholinergic crisis are exaggerated: muscarinic and nicotinic effects, and central nervous symptoms such as increasing tension, anxiety, headache and even drowsiness, delirium or mental confusion. The therapy of crisis requires careful emergency medical care particularly of respiratory failure. In the beginning, drug therapy should be administered if it has been determined that cholinergic crisis does not exist and drug tolerance is not at too high a level. Intravenous prostigmine or Mestinon may be utilized. If drug resistance is definite, the drugs should be withdrawn and respiratory failure managed by tracheotomy and respirator. In many instances three to 12 days of this supportive therapy may lead to partial or even relatively complete remission, with return of sensitivity to the effects of the anti-cholinesterases.

The treatment of cholinergic crisis may require the administration of large doses of atropine starting with 1.0 milligram of atropine sulfate intravenously or subcutaneously. Respirator care also may be necessary. As much as eight milligrams of atropine have been administered in four hours. Recently, the use of the newer oximes have been recommended.²⁰ Two of these, PAM (pyridine-2-aldoxime-methiodide) and DAM (di-acetyl-monoxime) have been developed as drugs which reactivate inhibited cholinesterase enzymes. They were first utilized in overcoming nerve gas poisoning due to inhibition of cholinesterase. These drugs reverse the cholinergic effects of the quaternary ammonium

compounds (such as prostigmine and Mestinon) especially the nicotinic reaction in striated muscle. However, atropine still will be needed against muscarinic side effects.

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TB And Other Respiratory Diseases Related

The relationship between tuberculosis and other respiratory diseases is so intimate, particularly from the medical standpoint, that from the very beginning it has been impossible to be concerned only with tuberculosis and not with other respiratory diseases. Thus, silicosis, which notoriously plays an important role in precipitating the development of active tuberculosis disease, has been a concern of the NTA and its affiliates from the time of the founding of the NTA more than half a century ago. At the present time, through improved bacteriological methods, more and more illnesses clinically indistinguishable from tuberculosis are being recognized which are found to be due to mycobacteria similar to, but distinct from the *Mycobacterium tuberculosis*. There is an intimate relationship between tuberculosis and emphysema and chronic bronchitis, and outbreaks of influenza notoriously have been accompanied by a spiking of the tuberculosis death rate.

Respiratory diseases as a whole form a group of illnesses of tremendous public health importance which have been badly neglected in the past, and which the NTA, together with its medical section, the American Trudeau Society, and the affiliated tuberculosis associations, can be helpful in studying and bringing under better control. Based on a three year average of deaths in 1953-55, these diseases as a group (excluding cancer of the respiratory system) are fifth in the list of causes of death, being exceeded only by heart disease, cancer, vascular lesions affecting the central nervous system, and accidents. If cancer of the respiratory system is added to the group, it becomes the number four cause of death.

So far as frequency of illness is concerned, rather than mortality, there is no question but that respiratory illnesses head the list.

Benactyzine Hydrochloride*

The Treatment of One Hundred Hospitalized Patients

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THIS study was carried out to appraise and evaluate the efficacy of benactyzine hydrochloride** alone or in combination with delvinal† as an adjunct to the routine treatment of 100 hospitalized patients. All of these appraisals were repeated in the same group of patients, using them as a control. Placebos of the same uniform dimension and size were made up so that even the floor nurses could not distinguish the Placebo capsules from those containing the active drugs. The patients selected for this study can be classified as those usually found in the wards of any general hospital. They were not hospitalized for the express purpose of treatment of a neurosis or a psychosomatic disease.

PHARMACOLOGY

Delvinal is 'Vinbarbital', the generic name adopted for the chemical 5-ethyl-5-(1)-methyl-1-betenyl (barbituric acid). It provides sedation with no 'hangover' and a low incidence of side reactions. Its induction period is short, and the duration of its effect is moderate. It should be administered with caution to debilitated or elderly patients.

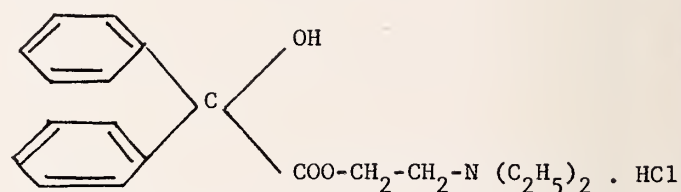
Benactyzine is anticholinergic because it inhibits transmission of nerve impulses between neurons or at neurovisceral junctions similar to 'Atropine', but it only has about one third of the effect of Atropine. Its main effect is on the central nervous system. It has been found to enhance or accentuate the barbiturate-induced hypnosis, and it was for this reason that some of the studies to be described were carried out, using a combination of benactyzine combined with delvinal. Convulsions may be produced with massive doses of benactyzine. This drug is localised to the brain in high concentrations and it is metabolized by the kidneys and liver. Its low toxicity has been well established. Previous studies suggest that the degree and speed of emotional reactions both in normal and abnormal people is decreased by benactyzine.

Benactyzine hydrochloride was first described in Switzerland in 1936. Much of the original investigational work was done in Scandinavia. In Scandinavian countries it is known as 'Parasan'.

Benactyzine hydrochloride is a bitter tasting white crystalline compound with a molecular weight of 364 (CCCLXIV). It is readily soluble in water. Chemically, benactyzine is the hydrochloride of diethyl-aminoethyl ester of benzoic acid.

STRUCTURAL CHEMICAL FORMULA

Benactyzine hydrochloride has the following formula.



It is a bitter tasting, white crystalline compound with a molecular weight of 364. It melts at 177-178° C. It is readily soluble in water.

In aqueous alkaline solution, the ester hydrolyzes fairly readily to benzoic acid and diethyl-aminoethanol. A considerable loss of potency occurs when the solution is autoclaved or heated to the boiling point.

When the crystals are placed in sulfuric acid, a cherry-red color develops in 15 to 30 seconds because of the liberation of benzoic acid.

* * * *

Benactyzine differs from those tranquilizing drugs which are anti-adrenergic because it is anticholinergic. It abolishes the psychic pain, fear, and neurotic inhibitory avoidance response engendered by stress. By eliminating fear, it probably raises the pain barrier. We are well conscious of the fact that in the average patient the mere idea of being hospitalized will produce anxiety and some degree of nervousness even in the most solid citizens.

Benactyzine is a mild anti-depressant for clinical states of mental depression found in human beings. It will also tend to heighten the precision of performance. Davies⁴ reported that in ambulatory patients with endogenous depression and in whom agitation was severe, benactyzine hydrochloride was found to have good control of their symptoms.

Jacobson⁵ claims that the three common effects of suavitil in man are:—(1) Dizziness. (2) Muscle Relaxation. (3) Thought blockage. 'The subject has a tendency to think about nothing. In cases where a flow of ideas is keeping the person from falling asleep at night, suavitil may break the mood. It has

* This study was carried out with a grant in aid from the Merck, Sharp and Dohme Corporation.

** Benactyzine Hydrochloride supplied as Suavitil by Merck, Sharp and Dohme.

† Delvinal supplied for this study by Merck, Sharp and Dohme.

been found that patients with symptoms of hysteria should not be treated with suavitil.'

The central effect is particularly pronounced when the subjects are exposed to psychic stress because they are more relaxed mentally and physically after taking benactyzine hydrochloride. It can be used effectively in the treatment of psychoneurosis and psychosomatic disease. The relationship between physician and patient is eased and the patient is better able to cope with his or her condition. Furthermore, it produces a state of emotional and physical relaxation without drowsiness. There is no hypnosis and no addiction.

Benactyzine will suppress or slow the normal rhythm or brain waves of the electro-encephalogram and yet the treated patient will remain alert and objective during treatment. There are no hallucinations. Its untoward side effects are:—(1) Dryness of mouth. (2) Palpitation. (3). Difficulty in visual accommodation. (4) Nausea.

As mentioned above, benactyzine is easily absorbed and rapidly distributed to body tissues, practically none remaining in the blood stream. It is localized in the brain in high concentrations. 'Twenty minutes after ingestion of two milligrams

of benactyzine hydrochloride, normal subjects experience a sense of relaxation or mental detachment amounting almost to depersonalization, loss of alertness, difficulty in concentrating and slight hesitancy in speech.' Reduction in power of concentration and blocking of spontaneous thought-stream may be striking. In humans, it will cause a heaviness of limbs in addition to blocking of thoughts.

Jacobson⁵ demonstrated in experiments with six psycho-neurotics (exposed to stress and provoked by emotion) that suavitil lessened automatic responses to emotion. It differs from Meproamate because the latter has a diffuse inter-nuncial action.

Previous studies have shown no evidence of addiction even in patients treated for more than eight months with benactyzine hydrochloride. In this study, suavitil was found to be effective in 88 per cent of those hospitalized, and its side effects were insignificant. The usual daily dose ranges anywhere from one to four milligrams. However, in Parkinsonism, one may increase the dosage up to 10 milligrams, three to four times per day.

As has been stated before, in this study one hundred hospitalized patients were selected at random, and these included both medical and surgical pa-

COMBINATION X (TWO DIFFERENT STRENGTHS)
(Suavitil 1 mgm-2.5 mgm)

NUMBER OF						COMMENTS
PATIENTS TREATED	AGE	FEMALE	FEMALE	MALE	MALE	
		MEDICAL	SURGICAL	MEDICAL	SURGICAL	
19	15-21	6	3	6	4	Suavitil (2.5 mgm twice daily) after three days had excellent results in this age group, in both sexes, and in both medical and surgical classifications.
10	25-40			10		Suavitil (2.5 mgm three times daily) was standard in this group. Seven cases were increased to 5 mgm three times daily with no ill effects except for complaints of "furry tongue."
24	25-50				24	All patients in this group were started on 1 mgm Suavitil three times daily, then increased gradually until eleven patients were receiving Suavitil, five mgm three times daily, with no side-effects. The others in this group were maintained on 2.5 mgm three times daily with good results. None were considered in the "poor results" category.
7	35-45		7			These patients were noticeably calmed by Suavitil, 1 mgm, three times daily. One case of vertigo was recorded when the dosage was increased to 2.5 mgm three times daily. Five of these cases were hysterectomies. No bad effects were noted with increased dosages.
7	40-70			4	3	Suavitil, 2.5 mgm, twice daily, was started and then increased to Suavitil 5 mgm twice daily. No ill effects were recorded in this group of patients.
12	45-60		12			This age group seemed better quieted on Suavitil 1 mgm three times daily. Increased doses in eight patients produced mild side effects e.g. blurred vision, nausea, dizziness. Three patients were considered failures.
21	45-65	21				After varying doses of Suavitil in this age group these patients were easily maintained in calm condition on Suavitil 2.5 mgm twice daily. Six results in this group were considered unsatisfactory.

tients. An attempt was made to differentiate and appraise the relative effects of efficacy of suavitil alone, and also suavitil combined with delvinal. No patients with diagnoses of neuroses or psycho-neuroses were included among these patients. The so called 'double-blind' technique was followed and the capsules were labelled 'X', 'Y' and 'Z'. Only one nursing supervisor was aware of the actual identity of the capsules. So called combination 'X' capsules contained only suavitil and were prescribed in doses of 1.5 and 2.5 mgm.

Those tablets containing suavitil and delvinal were referred to as combination 'Y' and they contained a combination of one milligram of suavitil and 100 miligrams of delvinal. It was learned that in those patients over 55 or 60 years of age (the so called geriatric group) this combination could not be recommended.

In evaluating the results of suavitil alone it seems very definitely that male patients require a greater dosage for effective results than female patients, in order to obtain a so called end result. The effective dose for males was somewhere between 2.5 milligrams to 5 milligrams three times per day, whereas the female patients demanded dosages from 1 milligram to 2.5 milligrams three times per day. It was learned that over-dosage caused mild side effects such as vertigo, blurred vision, nausea, dizziness,

and furred tongue, but none of these untoward side effects were of a serious nature.

It was concluded that there was no great advantage in combining delvinal with suavitil. Some lethargy was present in a few instances. Undesirable side effects such as vertigo and nausea occurred usually in those patients over 55 years of age.

Controls were maintained using placebos in capsule form which had the outward appearance of the two other types of capsules, therefore made suitable for the so-called 'double-blind' technique which was followed in this study.

SUMMARY

1. There were 12 untoward poor results in the suavitil category; 88 per cent of these hospitalized patients responded well to benactyzine hydrochloride both preoperatively and postoperatively.
2. No essential beneficial effect was found in combining suavitil with delvinal.
3. Restless sleep could be avoided the night before surgery and in many instances barbiturate drugs usually ordered on the night prior to surgery could be omitted.
4. Much of the tension associated with surgery was lessened both prior to, and following major surgery. The patients appeared to be unaware, or

COMBINATION Y
(Suavitil with Delvinal)

NUMBER OF						
PATIENTS		FEMALE	FEMALE	MALE	MALE	
TREATED	AGE	MEDICAL	SURGICAL	MEDICAL	SURGICAL	COMMENTS
19	15-21	6	3	6	4	Combination Y given three times daily was effective and no ill effects were noted. There was no particular change in this group in the reaction to Combination Y to that of Combination X.
10	24-40			10		Combination Y was given twice daily with good results. When dose was increased to three times daily there were no outstanding changes or complaints.
24	25-50				24	Combination Y given three times daily. Good results. No ill effects.
7	35-45		7			Combination Y was given three times daily to these patients with good results. Some lethargy was noted in a few cases but there were no startling side effects. These patients were able to sleep better.
12	45-60		12			Combination Y was given twice daily, and was most effective on nine of these patients. No sedation was required. No ill effects noted.
21	45-65	21				Combination Y was given twice a day and was effective in thirteen patients. In the remaining eight patients, all of whom were over 57 years of age, lethargy and/or nausea occurred.
7	40-70			4	3	Combination Y given twice daily was most effective in three patients. These three patients were unable to tolerate increased dosage because of vertigo and nausea. This group were all over 60 years old. In the remaining four patients in this group increased dosage to three times daily was successful.

COMBINATION Z
(Placebo)

NUMBER OF						COMMENTS
PATIENTS TREATED	AGE	FEMALE	FEMALE	MALE	MALE	
		MEDICAL	SURGICAL	MEDICAL	SURGICAL	
19	15-21	6	3	6	4	Combination Z worked poorly on all but two of these patients. The female surgical patients became more difficult to manage on Combination Z. Fretfulness with the nurses and food was the chief complaint.
10	25-40			10		In this group four patients were suffering from hypertension. These patients showed a definite increase in blood pressure after a short period on Combination Z. There was no change in the other six cases.
24	25-50				24	Combination Z used successfully in three patients. The remaining 21 patients became irritable. They were definitely not tranquil patients on Combination Z.
7	35-45		7			Patients were given the placebo following the administration of both Combination X and Y, did not remain tranquil after two days on Combination Z. Patients were uncooperative and depressed. Lethargy was more noticeable while on placebos than when given Combination X and Y.
12	45-60		12			There was a marked upset in nine of these patients on Combination Z. Depression was noticeable, and there was irritability among the patients themselves. The other three patients showed no change.
21	45-65	21				Eleven patients in this group were suffering from hypertension. These patients had responded very nicely to small doses of both Combination X and Y. However, on Combination Z these same patients showed a decided rise in blood pressure after two days therapy. There was no change in the remaining patients in this group.
7	40-70			4	3	Combination Z was unsuccessful in six patients in this group. The other patient was very difficult to soothe or reason with. He became belligerent without Combination X and Y. He had withdrawal symptoms from alcoholic beverages.

at least undisturbed by routine preparation prior to surgery.

5. In this study, benactyzine hydrochloride was substituted routinely for the usual barbiturates the night before surgery.

6. No great hypotensive effect was noted after administering suavitil although there was a slight lessening of blood pressure in a small number of patients.

7. It was concluded that much of the apprehension, depression and anxiety that accompanies hospitalization can be avoided by prescribing suavitil to patients prior to actual admission to the hospital.

8. Greater patient cooperation was maintained because suavitil lessened many of the usual nervous and emotional disturbances found in hospitalized patients.

9. No serious side effects were found after administration of benactyzine hydrochloride.

10. Benactyzine hydrochloride is not a tranquilizer but is more of a 'casualizing' drug, and modulates the diffuse over response to sensory stimuli.

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Hereditary Hemorrhagic Telangiectasia

(Babington's Disease, Rendu-Osler-Weber's Disease,
Goldstein's Heredofamilial Angiomatosis)

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I. INTRODUCTION AND DEFINITION

THE purpose of this paper is to review hereditary hemorrhagic telangiectasia. This disease, while not very common, is probably frequently overlooked by many practitioners of medicine. A significant factor in its apparently low incidence is that it is often not diagnosed. Hemorrhagic phenomena involving one or more organs of the body are certainly commonly encountered in clinical medicine. It is important simply to consider this disease in the differential diagnosis of bleeding thereby sparing the patient many unnecessary diagnostic and therapeutic procedures.

Hereditary hemorrhagic telangiectasia may be defined as a vascular disease characterized by localized dilatation of the arterioles, venules, and capillaries into angiomata. These lesions are inherited and may involve any one or more organs of the body. Bleeding may be spontaneous or follow slight trauma.

II. HISTORY

Awareness of and interest in this disease appeared during the latter part of the last century. Babington,² in 1865, described hereditary epistaxis in five consecutive generations of one family. He made no mention, however, of angiomata or telangiectasia. Legg,²⁷ in 1876, reported a case of "hemophilia" occurring in an individual with multiple telangiectases. Rendu,³⁴ in 1896, described a man, age 52, with epistaxes for 40 years and with telangiectasia of the skin of the trunk, face and mouth. His father had repeated episodes of melena, and his mother and brother were known to have had frequent epistaxes. Rendu, however called this clinical picture a type of pseudohemophilia. Sir William Osler,^{30,31} in 1901, was the first to establish the true nature of the disease. He reviewed a number of families with the disease, and his description of the lesions and clinical features remains a medical classic. Weber,⁴³ in 1907, elaborated on some of the clinical features of the disease, and in particular pointed out the frequent occurrence of epistaxis prior to the development of obvious telangiectasia. Hanes,¹⁷ in 1909, described the histopathology of the lesions and

named the disease hereditary hemorrhagic telangiectasia. In 1931, Goldstein¹⁵ reviewed the literature and reported several families with the disease and renewed interest in it. Since this time there have been numerous family studies and case reports in the medical literature, in which the clinical and pathological features of the disease have been discussed and developed.

III. INCIDENCE

Hereditary hemorrhagic telangiectasia, although not common, is not a rare disease. Garland et al,¹³ in 1950, reviewed the literature and compiled 1,415 cases. Six hundred forty-eight were males, 703 females, and in 64 cases the sex was not indicated. Since this date there have been very many family and case reports of the disease. There is no apparent predisposition in either sex. Wintrobe⁴⁸ indicated that the majority of cases reported have been in people of Anglo-German, Latin, Scandinavian, and Jewish backgrounds. The disease has been considered virtually nonexistent in the negro until the past 20 years when cases of the disease have been reported in negro families.^{11, 24, 38}

IV. GENETIC ASPECTS

This disease is inherited as a simple non sex-linked mendelian dominant. Fitzhugh¹⁰ postulated the frequent occurrence of atavism (skipping one or more generations) in this disease; however, more recent studies seem to indicate that the disease may either be undiagnosed and/or asymptomatic in the so-called skipped generation. Stock⁴⁰ has indicated that in almost 20 per cent of reported cases there is a lack of familial history. Considering the frequency with which relatives are unavailable for examination, plus the probable significant number of asymptomatic individuals, the concept of the completely isolated case of hereditary hemorrhagic telangiectasia is open to question. Snyder and Doan (cited in 8) have postulated a so-called lethal homozygous state. They reported an infant, born of parents who both had the disease, who died at the age of two months of hemorrhagic complications secondary to multiple telangiectases. Fitzhugh¹⁰ and other early observers postulated a relationship between the telangiectatic gene and blood

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type O; no such association has been demonstrated in recent studies.⁵ Approximately 20 to 40 per cent of close relatives of a known case of hereditary hemorrhagic telangiectasia disease is discovered to have evidence of it. Bird et al⁵ in a recent excellent family study, found 32 or 19 per cent of 170 blood relatives of a 60 year old white male with epistaxis and hematuria to have evidence of the disease. Another fascinating aspect of the familial incidence of the disease is the frequency with which involvement of a particular organ system may be passed down from one generation to the next, i.e., pulmonary A-V fistula²¹ or gastrointestinal lesions with bleeding.²⁵ Cochrane and Leslie⁶ made an interesting observation in one family; the red headed members with the disease were noted to have had bleeding episodes, whereas no bleeding was noted with the dark haired ones.

V. CLINICAL FEATURES

The principal clinical feature of this disease is recurrent hemorrhage from the involved areas. The onset of hemorrhagic symptoms, usually epistaxis, is seen some time during childhood. In some instances a remission of bleeding may be seen around the time of puberty.⁸ During the third or fourth decade of life the lesions appear and tend to become progressively symptomatic. It is not at all unusual for the patient to be entirely asymptomatic and unaware of the disease until the fifth or sixth decade. The areas of predilection of these telangiectasia are as follows: nose, mouth, face, neck,

hands, trunk, feet. Just about every visceral organ has been found to be involved with the lesions to a variable degree. Bird⁵ et al found the distribution of hemorrhagic phenomenon in his cases to be as follows:

Epistaxis	90%
Mouth	20%
Gastro-intestinal	20%
Urinary Tract	15%
Pulmonary	5%
No bleeding manifestations	10%

There are three principal types of angiomatous lesions seen in this disease.^{3,17,30} A small punctiform usually macular lesion, a larger nodular lesion, and less frequently a spiderlike lesion. The macular and nodular lesions are usually sharply demarcated and have a purplish red color. The larger nodular lesions and the spiderlike lesions tend to appear later in the disease. These lesions can be differentiated from the telangiectasia of liver disease as well as other conditions. The typical arterial spider of liver disease is fiery red in color and pulsatile; it infrequently involves the mucous membrane, blanches readily on pressure, and is not commonly seen below the umbilicus. The lesions of hereditary hemorrhagic telangiectasia are usually purplish red, non-pulsatile (but usually bleed like an artery), and frequently involve the mucous membranes; they blanch incompletely on pressure and are seen in significant numbers below the umbilicus. The following table, modified from

TABLE 1

	H.H.T.	LIVER DIS.	PREGNANCY	NORMAL	NUT. DEFICIENCY
Family History	positive	occasionally	?	often	often
Hemorrhage from Lesions	yes	rare	rare	rare	rare
Age of Appearance of Lesions	most cases 20-30 yrs. punctiform	during disease	2-5 mos.	birth & puberty	any time
Morphology	rare spider fades	spider	spider	spider	spider
Effect of Pressure	partially reddish	usually completely fades			
Color	purple	bright fiery red			
Size (ave.)	1-3 mm.	center 1-3 cm. radicles 1-10 cm.			
Number (ave.)	hundreds	15-20	8-10	2-5	4-5
Skin Temp. of Lesion	no elevation	slight elevation	slight elevation	slight elevation	
Distribution	universal	mostly on face, arms, chest, rare below diaphragm, uncommon mucous membranes.			
Behavior after Death	fades	disappears	disappears	disappears	disappears
Behavior after Hemorrhage	fades	fades	fades	fades	fades
Disease of liver and spleen	occasional	usual	not seen	not seen	possible

Bean,³ will help in the differentiation of these telangiectatic lesions.

Another interesting feature of the lesions of hereditary hemorrhagic telangiectasia, according to Bean,³ is that they never disappear once they develop. This view is in opposition to the earlier views of Osler.³

Two other uncommon diseases associated with angiomas which should be mentioned in the differential diagnosis of these lesions are Lindau's disease and Sturge-Weber's disease.³⁹ Lindau's disease is a familial disease consisting of multiple angiomas of the retina, cerebellum, midbrain, and spinal cord associated in some instances with polycystic disease of the pancreas, liver, and kidney and cavernous hemangioma of the liver. Sturge-Weber disease consists of facial angiomatous nevi (nevus flammeus) plus meningeal angiomas. Lindau's disease is not associated with skin lesions or mucous membrane lesions. The skin lesions in Sturge-Weber disease are larger than the ones in hereditary hemorrhagic telangiectasia. Both these diseases should offer little difficulty in the differential diagnosis of hereditary hemorrhagic telangiectasia.

The diagnosis of this disease is not difficult in most instances, if one bears in mind the tetrad of positive family history, presence of visible telangiectases, tendency to bleed from these lesions, and usually normal bleeding and coagulation studies. However, exceptional cases are found in which only one organ system is involved or bleeding or coagulation abnormalities are present coincidentally.

In addition to other angiomatous diseases one must differentiate this disease from the hemorrhagic diseases based upon defects in plasma coagulation factors, in platelets, or in capillary function. The clinical features of these diseases plus relatively simple laboratory tests make the differential easy. For example: hemophilia appears only in males, delayed clotting time is present; in pseudohemophilia spontaneous ecchymosis is frequent, bleeding time is usually prolonged, and the tourniquet test is frequently positive. In allergic purpura there is often a positive tourniquet test and history of an allergen. Above all the characteristic telangiectasia is not present in any of the above hemorrhagic diseases.

Finally, one must be keenly aware of the possibility of hereditary hemorrhagic telangiectasia in cases of undiagnosed bleeding from the various organ systems. This disease may actually exist concomitantly with other lesions which in themselves could adequately explain the bleeding, i.e. peptic

ulcer.¹⁹ Endoscopic procedures^{14, 25} have been quite helpful in some of these cases.

VI. ETIOLOGY AND PATHOGENESIS

The etiology of this disease is unknown. The prevalent opinion is that these angiomas represent congenital anomalies of the arterioles, capillaries and venules.²⁰ Qualitative or quantitative changes in estrogenic substances have been implicated in the telangiectasia of liver disease and pregnancy.^{3, 4} Bean⁴ and his associates have demonstrated a direct relationship between increased excretion of estrogens in the urine and the appearance and number of telangiectases in pregnant women. The recurrence of uterine bleeding in post-menopausal women with cirrhosis, and the frequent occurrence of impotence, testicular atrophy, hair loss, and occasional gynecomastia in the male with cirrhosis are some of the indirect evidences that changes in the circulating estrogens may be involved in the formation of the arterial spider of liver disease. Thus far no direct association has been found between the lesions of hereditary hemorrhagic telangiectasia and estrogens or other hormonal substances. Koch and Escher²³ made the interesting observation that some of their female patients with hereditary hemorrhagic telangiectasia, during the five or six days just prior to their menstrual period, would note an exacerbation of epistaxis. A dramatic remission in this symptom would occur during the menses. They have correlated this clinical finding with changes in the circulating estrogens on the nasal mucous membrane.

Generally speaking, hemorrhagic phenomena are manifestations of:

- 1) disturbances of plasma elements.
- 2) alterations in the platelets.
- 3) disorders of capillary or larger blood vessel function.
- 4) disorders of capillary or larger blood vessel structure.

A detailed discussion of the first two factors is beyond the scope of this paper and not pertinent. Some features of normal capillary function include ability to contract following injury and the ability to withstand external and internal pressures. Clinically the tourniquet test and bleeding time give some indirect information regarding capillary function. In hereditary hemorrhagic telangiectasia the first three factors are usually normal and bleeding results from a structural defect in the angiomatous vessels.³⁶ As a result of the structural defect in the lesions, we also see functional abnormalities in the angiomatous vessels in that they bleed with minimal trauma and contract poorly when bleeding has begun.

VII. BASIC PATHOLOGY

The gross appearance of the lesions has been described above (punctiform, macule or papule, larger nodular and spiderlike lesions). Although the lesions are purplish red in color and non-pulsatile, they usually bleed in a pulsatile manner resembling an artery. Histologically,^{17,3,36} one sees marked thinning and dilatation of the vessel wall which consists virtually of a single layer of endothelium. There is a marked attenuation of the muscular and elastic tissue elements with consequent bulging and ballooning of the vessel wall. The defect results in a tortuous mass of aneurysmal vessels, and many newly formed vascular buds are often seen. In the lesions located in the skin, an obliteration of the papillary layer of the corium with loss of the stratum germinativum is noted.¹⁷ These angiomatous vessels are thought to be derived from arterioles, capillaries, and venules.

VIII. LABORATORY FINDINGS

Most often the hemorrhages result in a hypochromic iron deficiency anemia. In the large majority of reported cases, the bleeding and coagulation mechanism is normal, though a number of cases have been reported in which some abnormality in one or more of the bleeding or coagulation tests has been noted. In the family studied by Singer and Wolfson,³⁶ all members with the disease had a positive tourniquet test. Williams and Brick⁴⁷ reported a 51 year old white man with gastrointestinal hemorrhage as the principal symptom of the disease, with a positive tourniquet test. Smith et al³⁸ reported four cases in a negro family in which a total of nine cases of the disease were noted with concomitant thrombocytopenia. Weller⁴⁶ reported three cases of the disease in one family; the first case had a positive tourniquet test and prolonged bleeding time, the second had thrombocytopenia and prolonged bleeding time, and the third had a positive tourniquet test alone. The observation has been made⁴⁵ that frequently a tourniquet test on these individuals brings out small telangiectatic areas previously not discernible; some of these lesions may show bleeding, thus some of the cases reported with positive tourniquet tests may have been demonstrations of the above phenomenon.

IX. REVIEW OF SYSTEM INVOLVEMENT

A) Skin

The skin is involved in the large majority of the patients with hereditary hemorrhagic telangiectasia. The lesions may be any one of the three major types mentioned above or a variant of any one of them. Serious hemorrhage from the skin is a rarity primarily because of the ready accessibility of the bleeding area to local therapy. In Bird's⁵ series the

frequency distribution of the skin lesions was as follows:

Face	70%
Lips	65%
Nares	65%
Ears	35%
Hands	35%
Chest	15%
Feet	15%

B) Nose and Naso-Oropharynx

Epistaxis is present in from 90 to 95 per cent of patients who bleed from these lesions.^{8,20,22} The telangiectasia are particularly prominent in Kiesselbach's area, frequently of the spider variety. Nasal hemorrhage may be prolonged and profuse, requiring transfusion. The inner aspect of the lips, gums, tongue and hard palate are frequent sites of angiomatous lesions.²⁰ Henry²⁰ claims that the gums and hard palate bleed particularly frequently.

C) Eyes

The eye is an infrequent site of telangiectasia in hereditary hemorrhagic telangiectasia. Garner and Grossman¹² reported a 60 year old physician with epistaxis and skin lesions who had lesions in the conjunctivae which bled. The angiomatous nature of the lesions was determined with the use of the slit lamp. Landau et al²⁶ studied 29 members of a family, 11 of whom had hereditary hemorrhagic telangiectasia; seven of these patients had conjunctival lesions and two of these seven cases had retinal lesions. These lesions, as noted by ophthalmoscopy, were found to be segmental areas of dilatation and tortuosity of the retinal veins.

D) Lungs

Pulmonary telangiectasia and arteriovenous fistulae are a not uncommon occurrence in this disease.⁴¹ In fact, unexplained hemothorax,²⁸ hemoptysis, polycythemia, anoxemia, cyanosis and clubbing may be the presenting features of hereditary hemorrhagic telangiectasia.¹⁸ It has been estimated that between 50 to 60 per cent of cases of pulmonary A-V fistula reported in the literature have been in patients with other manifestations of hereditary hemorrhagic telangiectasia.^{41,21}

The diagnosis of pulmonary a-v fistula may be difficult or simple, depending on whether or not the fistula is large enough to cause symptomatology. The patient may present with signs of chronic anoxemia. Occasionally, a bruit may be heard over the lung in the area of the lesion.⁴¹ Radiographic examination of the chest, angiocardiology in particular, is necessary for the diagnosis. The important point is that every patient with hereditary hemorrhagic telangiectasia should be a suspect for a pulmonary arterio-venous fistula.

Tobin and Wilder⁴¹ reported two cases of pulmonary a-v fistula in a father and son, both with

skin manifestations and epistaxis. Heyde²¹ reported two certain, and one probable, cases in a family in which 36 members were examined and eight had evidence of hereditary hemorrhagic telangiectasia. The two certain cases were in a woman age 39 and her son age 18 years, both of whom had no pulmonary complaints; the diagnosis was made with the aid of angiocardiology. The third case was in a 53 year old woman (aunt of the first case) who died as a consequence of unexplained hemothorax. Hapthrop¹⁸ reported an 18 year old man who presented with polycythemia and died of pulmonary hemorrhage and congestive heart failure. Autopsy revealed multiple small a-v fistulae in both lungs and subcapsular telangiectasia in the spleen.

E) Gastrointestinal

Gastrointestinal hemorrhage, often the sole presenting symptom of this disease, is common. All three types of lesions have been found from oropharynx to the anus.^{25,37} There have been many case reports and family studies in which gastrointestinal bleeding has been a prominent feature of the disease. Goldman and Asher¹⁴ reported two cases with gastrointestinal bleeding in which characteristic lesions could be seen with the gastroscope. Williams and Brick⁴⁷ reported a 51 year old man with bleeding from the stomach, and telangiectasia was seen with the gastroscope; his brother had skin lesions and had had a subtotal gastrectomy for "ulcer." Hardt and Steigmann¹⁹ reported six cases of G.I. bleeding; in one case, where lesions were demonstrated at operation, there was no other evidence of the disease or positive family history. Two additional cases had gastrointestinal lesions in addition to other manifestations; both had a deformed duodenal bulb radiographically and had been treated for duodenal ulcer. One other patient with proven gastrointestinal telangiectasia had a duodenal ulcer present at autopsy. The remaining two cases had gastrointestinal lesions (gastric telangiectasia) with other manifestations of the disease and a positive family history. Thus, an appreciable number of cases of gastrointestinal telangiectasia and peptic ulcer have been reported, though peptic ulcer disease is so common it is not unreasonable to have the two diseases in the same patient. Insufficient statistical data are available to indicate whether or not there is an increased association of one disease with the other.

F) Liver and Spleen

Another interesting facet of this disease is the occurrence of hepatosplenomegaly, though its frequency is in dispute. Bean³ claimed that it is rather infrequent, occurring in only two per cent of cases. Smith and Luebach³⁸ and Angervall¹ felt that its occurrence is rather common. Hepatosplenomegaly

usually occurs in patients who have had the disease for a long time with repeated episodes of bleeding. Smith and Luebach³⁸ postulated the probable causes of hepatomegaly (and in some instances splenomegaly) are atypical postnecrotic cirrhosis secondary to post transfusion hepatitis, actual telangiectasia of the liver with occasional subcapsular hemorrhage from the telangiectasia, and congestive heart failure secondary to chronic anemia. They reported a 71 year old negro woman with hereditary hemorrhagic telangiectasia who, at autopsy, had an enlarged liver which contained numerous subcapsular telangiectases. Angervall¹ reviewed the changes in the liver in hereditary hemorrhagic telangiectasia, and reported a case with telangiectasia, not only of the smaller vessels of the liver, but also with a generalized vasculopathy of the larger arteries and veins; he also noted diffuse dilatation of the bile ducts. Schuster³⁵ described a case of hereditary hemorrhagic telangiectasia in which multiple aneurysms of the splenic arteries and veins were noted; the pathological findings in the spleen were usually non-specific and consisted of: hyperplasia of the reticulum, fibrosis, hyperemia, and hyaline depositions in the malpighian bodies.

G) Urogenital

Sporadic case reports are available indicating lesions in the bladder, kidney, and uterus. In general, lesions have been uncommon in these organ systems. Bird et al⁵ reported a 61 year old man with hereditary hemorrhagic telangiectasia and hematuria; diagnostic workup revealed telangiectasia in the bladder. Fort and Winstead¹¹ reported a 46 year old negro male with hematuria; pathological examination of the removed left kidney revealed lesions typical of hereditary hemorrhagic telangiectasia. This patient, however, had no other angiomatous lesions. Weller⁴⁶ reported a patient with menometrorrhagia and other manifestations of the disease. I was unable to find any reports implying directly or indirectly involvement of the ovaries, testes, or prostate.

H) Bone

Isolated angioma of bone have occasionally been reported, usually in patients without other angioma. Czerniack and Schorr⁷ reported a 65 year old white woman who presented with bone pain and who was found to have radiographic evidence of multiple angiomata in ribs and spine. The family history in this case was positive, and the patient had epistaxis and telangiectasia of the skin.

I) Central Nervous System

Central nervous system involvement in hereditary hemorrhagic telangiectasia is not common.³³ Michael and Lein²⁹ reviewed the problem of hereditary hemorrhagic telangiectasia with nervous

system involvement and they cite at least five cases in which central nervous system lesions, manifested by cerebrovascular accidents and convulsive seizures, occurred together with nasal and skin lesions. They reported a family in which several members of two generations had convulsive seizures; two of these cases had multiple small calcific foci seen on skull x-ray. One of these lesions was biopsied at craniotomy and noted to be a calcified angioma. The family had no other clinical evidence of telangiectasia.

X) Therapy

Therapy of this disease has thus far been relatively unsatisfactory. Therapeutic approach can be divided into three principal categories:

- 1) Attempts to control bleeding by local therapy.
- 2) Use of medication taken systemically with the hope of altering the lesions or their susceptibility to bleeding.
- 3) Treatment of the anemia resulting from repeated bleeding.

Epistaxis, the most frequent hemorrhagic manifestation, is often difficult to control. Mechanical packs are used. Repeated electro- and chemical cautery with chromic acid or silver nitrate is often necessary and may lead to septal perforation. Submucous resection of the septum has been performed in an attempt to control recurrent epistaxis, with poor results. Direct radium implants have been placed in the nasal cavity, with variable results.²⁰ Dreyfus et al⁹ reported implantation of four milluries of radium in each nostril in eight people with the disease, with supposedly perfect results after 12 months follow up. Plummer³² et al, reported a favorable result using oral thrombin to control intestinal bleeding. In the case of pulmonary arteriovenous fistulae, surgical therapy is often worthwhile, particularly where only one or two fistulae are present. These patients, if not operated, often have the threat of serious bleeding (even from small lesions), hemodynamic complications if the fistula is large, and an increased incidence of brain abscess.²¹

The large variety of different preparations used systemically in this disease is a reflection of the generally unsatisfactory results. Vitamin K, Vitamin P, Rutin,^{24,25} snake venom, irradiation of the spleen, estrogens and adrenocortical steroids have all been tried with equivocal results. Kushlan^{24,25} reported the beneficial effect of Rutin on epistaxis and G.I. bleeding for considerable periods (Personal Communication).

According to Bean,³ the increased level of estrogens in the blood should make telangiectatic lesions more abundant. Kocher and Escher,²³ however,

have observed that the principal effect of the estrogens is on the nasal mucous membrane which becomes thicker, more moist, and often the telangiectasia may disappear. They treated three females with estrogens and two males with estrogen-androgen combinations. The change in the nasal mucous membrane occurred in from one to three weeks after the onset of therapy and was accompanied by a decrease or cessation of epistaxis, but prompt relapse occurred after the cessation of treatment. These authors also claimed to notice blanching and diminution in size of skin lesions in these patients. Waller⁴² treated a 57 year old white man with stilbestrol, five mg. daily. In four days he noted decrease in epistaxis; after 14 days of therapy, the dose was reduced to one mg. daily with recurrence of nasal bleeding. In spite of the return to original dose, with decrease in epistaxis, exacerbation occurred after a few months.

The use of estrogens and estrogen-androgen combinations has been the only therapeutic approach in which a significant number of cases have had at least temporary benefit. Epistaxis has been the only form of bleeding that has benefitted from these agents. Considering their frequent side effects from prolonged use together with the frequent return of symptoms, these agents will probably not offer a satisfactory therapeutic solution.

Williams and Brick⁴⁷ used ACTH and Cortisone on a 51 year old white man with gastrointestinal bleeding, without apparent benefit. There are very few reports in the literature regarding the efficacy of corticosteroids in this disease; the few available are unimpressive.

Finally, one has to consider treatment of the anemia secondary to blood loss by adequate nutrition, oral iron, and transfusions.

XI. PROGNOSIS AND MORTALITY

The course of hereditary hemorrhagic telangiectasia is one of repeated episodes of hemorrhage, massive or trivial, in most cases. Iron deficiency anemia and, in the cases requiring repeated transfusion, serum hepatitis with possible post necrotic cirrhosis are potential threats. In general, this disease is compatible with longevity. Henry²⁰ stated that three out of 31 of his observed cases died directly as a result of their disease (9.7 per cent). Houser²² reviewed the literature and estimated that some four per cent of patients with this disease die directly as a result of it.

XII. SUMMARY

Hereditary hemorrhagic telangiectasia is inherited as a simple mendelian dominant. It is a vascular disease characterized by localized dilatation of

arterioles, capillaries and venules into angiomata in various parts of the body, with a tendency for these lesions to bleed. The clinical, pathological and therapeutic features have been presented. This disease is probably much more common than is generally thought, and it should always be considered in the differential diagnosis of bleeding from an organ system.

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Anesthetic Considerations In Open Heart Surgery

A Preliminary Report

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THE use of cardiopulmonary bypass has introduced anesthetic problems requiring modification in anesthetic management and investigation into new areas. The methods and techniques used at the Hospital of St. Raphael will be discussed. While these have proven themselves satisfactory, it is appreciated that there is no one method or technique which, as yet, fulfills the needs of the ideal anesthesia.

METHODS

The heart lung apparatus in use is a screen oxygenator, the Mark G-K (Fig. 1 and 2). The device is based on original research of Gibbon and modified by Gaertner and Kay. The pumps are DeBakey non-occlusive type made from nylon base formica. The apparatus employs the so called high flow principle wherein the output on the arterial side is reg-

ulated so as to simulate the calculated normal cardiac output for the patient based upon the principle of Grollman that normal cardiac output is a function of the surface area of the body.¹ Explosion proof construction throughout the pump is a distinct advantage. It is mobile and relatively simple to operate requiring but one person for its management; it adequately oxygenates blood with minimal hemolysis and danger of air embolism is minimal.² The oxygenating chamber is surrounded by a fine electric coil which keeps the enclosed atmosphere and blood at 98.6° F.

The anesthetic management of the patient

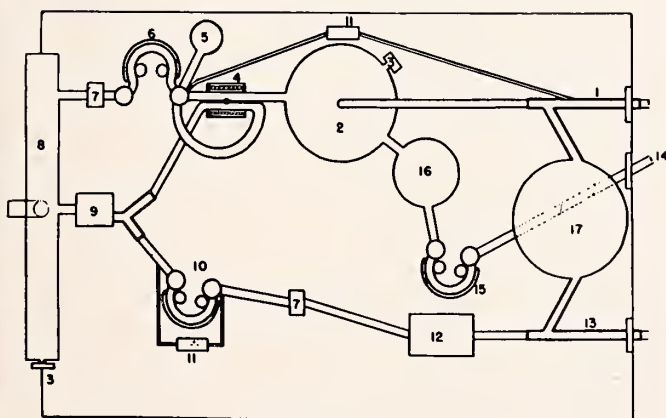


FIGURE 1

Schematic representation of the pump-oxygenator system: 1, the venous-inflow line; 2, the venous reservoir; 3, level-sensing devices; 4, occluder; 5, burette for the administration of blood and fluids; 6, recirculation pump; 7, high-pressure stops; 8, oxygenator; 9, holder for pH electrodes; 10, arterial pump; 11, arterial and venous cuvette oximeters; 12, arterial filter; 13, arterial output to patient; 14, coronary-sinus inflow; 15, coronary-sinus pump; 16, coronary-sinus reservoir; 17, priming reservoir. (Reprinted by permission from Jones, R. E., and others: Proc. Staff Meet. Mayo Clinic 30: 105, 1955.)

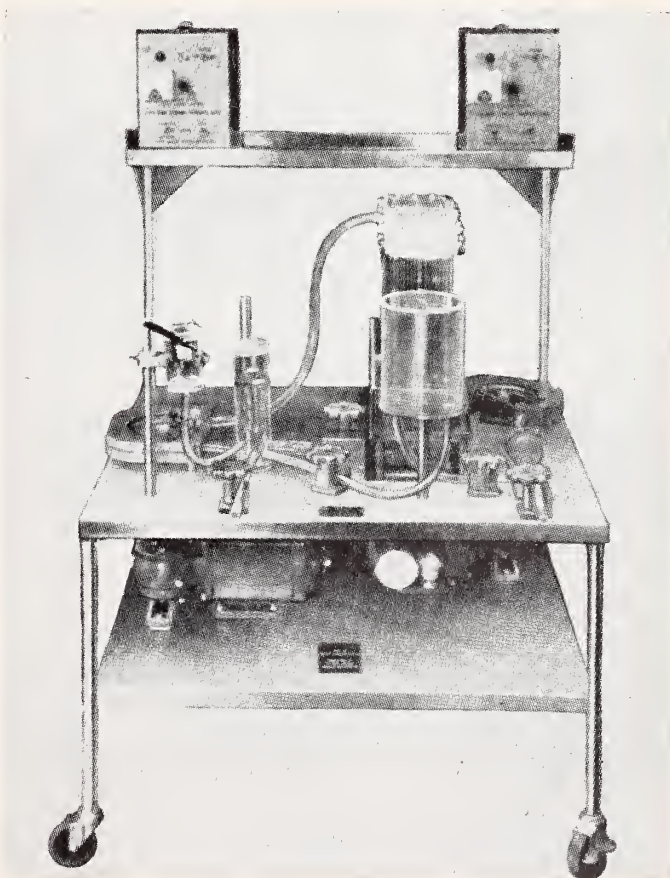


FIGURE 2

General view of the Mark G-K heart-lung apparatus.

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actually begins the day prior to surgery when the patient is visited in consultation and his chart reviewed. The cardiothoracic surgeons and cardiologists have prepared the patient both psychologically and medically for the contemplated surgery. A brief explanation is given to the patient as to what he may expect in the operating room prior to anesthesia. The explanation is tempered by the patient's insight, age, and mentality. We feel that this is important for it avoids the shock and excitement of strange and frightening experiences. The patients are most grateful for this consideration. Pre-anesthetic medication is ordered to produce a patient who is drowsy, relaxed, and yet not overly depressed. To achieve this state, a barbiturate is ordered the evening prior to surgery to insure a restful night. One and a half hours prior to surgery, promethazine is given for its quieting, potentiating and antiemetic effect, the dosage depending upon the patient's age, weight, and the estimated reflex excitability.^{3,4,5} Based upon a similar estimate, demerol and a belladonna derivative are given one hour prior to surgery together with a repeat dose of promethazine.

Being judicious in the use of demerol, we have not been plagued with the dysphoria and other adverse effects ascribed to the use of narcotics in pre-anesthetic medication.⁶ Generally, we use scopolamine in preference to atropine for its tranquilizing, drying, and amnesic action. In addition, scopolamine has some vagolytic action which is not, however, of the magnitude of atropine. Scopolamine is not used in the infant or elderly, and should a tachycardia be present due to cardiac pathology, the belladonna derivative is omitted in the pre-anesthetic medication. In this latter instance, it may be given intravenously during surgery to obtund any adverse reflexes which arise. As in the anesthetic management of all patients, these drugs are given to meet the individual need.

During the evening prior to surgery, all equipment is made ready. For this purpose, we have a check list upon which is listed every item that will be used during anesthesia or that might possibly be needed (Table 1). We feel that there is too much at stake in these cases for one to rely upon memory alone. In addition, there are a multitude of items not used in the anesthetic management of the usual case which can easily be overlooked without a check list for reference. In addition to this preparation, the electrical lines in the operating room were originally evaluated to be certain that they are capable of carrying the load placed upon them by the many extra electrical devices. Throughout surgery, the patient lies upon a special temperature controlling blanket incorporating coils for this purpose.* A

TABLE 1
CHECK LIST

Intubation

1. Two anesthesia machines, one for patient, one for oxygenator, and check reserve tanks in case piped system fails.
2. Laryngoscope
3. Spray nebulizer with 1 cc. 1% pontocaine
4. Four cuffed endotracheal tubes
5. Adapter and chimney Y
6. Adhesive tape
7. Bite blocks
8. Chest catheter for endotracheal suctioning.

I.V. Anesthesia

1. Two—two way stopcocks
2. Two—20 cc. syringes
3. Four—5 cc. syringes
4. Two—15 gauge needles
5. Assortment 18 and 20 gauge needles
6. 2½% pentothal solution
7. Edrophonium (Tensilon)
8. D-tubocurarine chloride
9. 0.2% succinylcholine solution
10. Four transfusion sets
11. Two infusion sets.

Special Equipment

- | | |
|--------------------------------|----------------------------------|
| 1. Esophageal thermometer | 5. Simpli-scribe |
| 2. Defibrillator and pacemaker | 6. Therm-O-Rite Unit and blanket |
| 3. Tray with cardiac drugs | 7. Jefferson Ventilator |

- | | |
|------------------|----------------|
| Ouabain | Ephedrine |
| Cedilanid | Atropine |
| Calcium chloride | Aminophyllin |
| Adrenalin | Procaine 20% |
| Vasoxyl | Procaine amide |
| | Quinidine |

Miscellaneous

- | |
|--|
| Heparin |
| Protamine |
| Solution of levarterenol bitartrate (4 cc. in 1000 cc. 5% M/W) |

4. Cardio-encephalographic unit
 - a. EEG
 - Electrodes (2 sets)
 - Table clamp and ground
 - b. EKG
 - Leads
 - Needle electrodes
 - Ground wire

similar but smaller blanket is placed across the lower portion of his body. Both blankets are connected to a refrigerating-heating unit from which a cooling or warming solution can be pumped, either cooling or warming the patient as needed.

The induction of anesthesia is begun using a sleeping dose of 2½ per cent sodium pentothal given intravenously. At this point, all anesthesia procedures are accomplished as expeditiously as possible for these patients often have a poor physical status. A 0.2 per cent solution of succinylcholine chloride is started intravenously and the patient is ventilated with 100 per cent oxygen at high flows for one minute after he has been rendered apneic.

* Therm-O-Rite Products Corporation, Buffalo, New York.

Thereupon, his pharynx, larynx, and trachea are sprayed with 1 cc. of 1 per cent pontocaine. Following this, hyperventilation is again carried out with 100 per cent oxygen and then a suitable sized, cuffed, oral, endotracheal tube is inserted. Anesthesia is then maintained using a six liter flow of nitrous oxide and two liter flow of oxygen per minute by a semi-closed system with carbon dioxide absorption in the circuit. This mixture of nitrous oxide and oxygen continues throughout surgery unless conditions warrant an increase in the oxygen tension. Once the induction has been carried out, succinylcholine is discontinued and respirations are controlled, then assisted until it is felt that all effects of the succinylcholine have worn off. Once respirations are again normal, an apneic dose of d-tubocurarine is given in divided doses and the patient is once again carried on controlled respirations throughout surgery, especially when the chest is open, using a mechanical breathing device, the Jefferson ventilator.

During the induction period, another anesthesiologist inserts two 15 gauge intravenous needles, attaches the cardioencephalogram and connects the heating-cooling unit. Finally an esophageal thermometer is placed through the nasopharynx and taped in position.

The previously described induction is essentially that for adults and older children in whom venepuncture can be carried out with relative ease. The small child or infant is induced with cyclopropane using suitable size rebreathing devices. At this time, a venous cut-down is done if, for any reason, venepuncture has not been considered satisfactory. Cyclopropane affords the advantage of a rapid and smooth induction and is followed by a maintenance period essentially as described for the adult. Small doses of pentothal are given periodically to insure hypnosis, and curare is repeated as needed to insure complete diaphragmatic paralysis. This technique, as evidenced by continuous electroencephalographic monitoring, maintains the patient in a very light plane of anesthesia, providing little more than analgesia and amnesia. Surgery is made possible by skeletal muscle paralysis provided by the relaxing agent. When surgery has progressed to the point where the patient is ready to go on bypass, an additional small dose of both pentothal and d-tubocurarine is given "to carry the patient over the period of bypass."⁷

Blood loss during surgery is measured by weighing dry sponges and measuring the contents in suction bottles as well as estimating that which is lost on drapes and gowns. The blood so lost is replaced completely with compatible citrated blood. Just prior to going on bypass, the patient's blood is heparinized (1.5 mg. per kg.) and thereafter only

freshly drawn heparinized blood is used for replacement. While on bypass, the blood pressure and pulse are no longer obtainable by the usual palpatory or auscultatory methods. However, a catheter is placed in the internal mammary artery before going on bypass and the intra-arterial pressure is obtained with a Satham pressure transducer and recorded on a Sanborn Twin Viso Recorder.

No attempt is made to oxygenate the blood which primes the heart lung apparatus until just before the patient goes on bypass. At this time, a flow of 10 to 15 liters of oxygen is turned on from a standard anesthesia machine. Carbon dioxide and anesthetic gases or vapors are not added to the oxygen. The oxygen flows through a warming and humidifying chamber and then into the oxygenating chamber of the heart lung apparatus about which are placed warming coils. These latter serve to keep the blood at body temperature. The blood which primes the oxygenator is likewise warmed to body temperature.

While on bypass, no attempt is made to ventilate the patient because the function of the lungs is carried on by the heart lung apparatus. The lungs are inflated sufficiently with the anesthetic mixture so that they are not atelectatic. This generally requires about four cm. of water constant pressure. We have not seen the need for helium-oxygen mixtures at this time and no untoward effects have resulted. Electroencephalographic monitoring continues throughout both partial and total bypass. In addition, a continuous electrocardiographic tracing is made.

When intracardiac surgery is completed, cardiopulmonary bypass is discontinued and 40 per cent of the calculated dose of protamine sulfate (the calculated dose needed to neutralize the heparin being two mg. per kg.) is given slowly, intravenously in divided doses. A sample of blood is then drawn and sent to the laboratory for "protamine titration."⁸ This latter procedure informs us how much additional protamine is needed to neutralize the remaining heparin. Usually, it turns out to be 100 per cent of the calculated dose, although occasionally, it has been necessary to give slightly more than the calculated dose.

As the chest wall is being closed, the mechanical ventilator is discontinued and manually controlled respiration is carried out. At this point, spontaneous respiration gradually returns, and by the time the dressing is applied, respiration is adequate enough to allow extubation. All patients have awakened immediately at this time and their sensorium has been clear enough so that they may complain of pain and respond to simple commands. The use of antitumor agents has not been required as yet in our series.

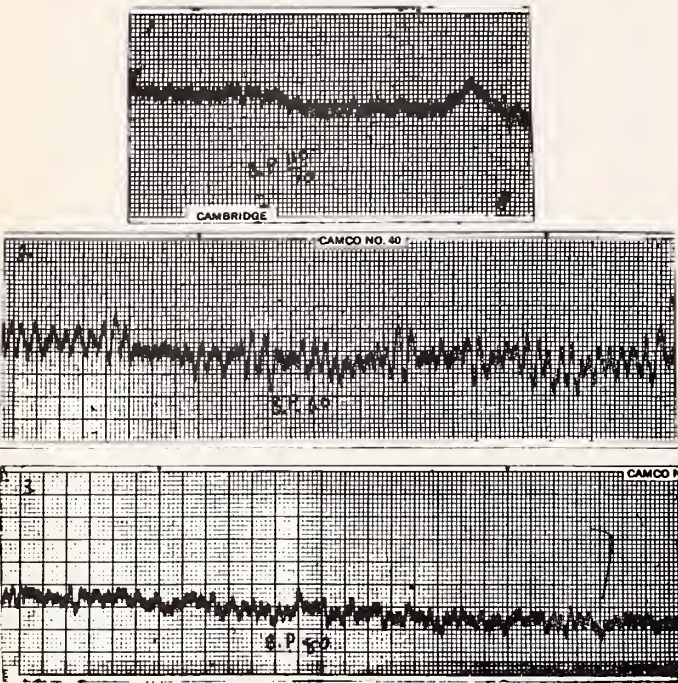


FIGURE 3

Top tracing shows the EEG pattern immediately after induction. Very light general anesthesia. The middle tracing is the EEG pattern when on partial bypass before going on total bypass, and the activity is consistent with cerebral hypoxia in a steady state of anesthesia. B.P. 60. This illustrates the hazards to the brain and vital organs at this time. The bottom tracing shows the marked improvement in cerebral oxygenation once total bypass is accomplished.

RESULTS

Six patients have been operated upon to date using the previously described methods and tech-

niques. The first patient had a severe degree of aortic stenosis due to rheumatic heart disease. His physical condition was most precarious, but it was felt that surgery offered the only possibility for a return to reasonable physical activity. The patient expired under anesthesia before it was possible to use the heart lung apparatus. After the chest was opened, there was a gradual loss in the force of the heart beat. Cardiac massage, calcium chloride, and adrenalin were of no avail and the heart gradually stopped. There was no ventricular fibrillation. The electroencephalogram just prior to arrest, was consistent with a light anesthesia such as is shown in Fig. 3. It then progressed to a slowing of the cycling followed by an increase in the amplitude of the waves and then lowering of the amplitude and the tracing finally became a straight line as the effective heart beat was lost. Cardiac massage did not alter the encephalographic picture even though performed by very experienced personnel.

The next five patients had uncomplicated anesthesia and surgery. Tables II and III give a brief summary of the pertinent data. Figures 3, 4, and 5 are tracings of the electroencephalogram which are self explanatory and are typical of the effect of partial bypass on cerebral oxygenation. They are the actual tracings of case number six.

The screen oxygenator, used in these cases, has proven itself quite effective by others, especially at the Mayo Clinic,² so that there was no need for a repetitious study in arterial and venous blood oxygenation at this time. This was done, however, during the course of 50 laboratory studies upon dogs

TABLE 2
PERTINENT DATA ON AGENTS USED FOR PREMEDICATION AND ANESTHETIC MANAGEMENT

CASE #	AGE	WT.	P.S.	DIAGNOSIS	D	PRE MED				SC*	CURARE	PENT	ANESTH. TIME
1	55	162	3	Aortic Stenosis	50	1/200	....	2525	....	900 mg.	15 mg.	275 mg.	4 hrs.
2	7	50	2	Pul. Stenosis	30	1/300	....	....	50	50 mg.	15 mg.	400 mg.	5½ hrs.
3	36	115	2	A. Septal Defect	100	1/150	....	2525	....	100 mg.	15 mg.	575 mg.	7 hrs.
4	4	35	2	A. Septal Defect	20	1/300	....	....	50	100 mg.	14 mg.	175 mg.	5½ hrs.
5	26	95	3	Pul. Stenosis	75	1/150	....	2525	....	150 mg.	27 mg.	650 mg.	6¼ hrs.
6	44	130	2	A. Septal Defect	100	1/150	....	2525	100	200 mg.	48 mg.	1000 mg.	6 hrs.

D—Demerol A—Atropine B—Barbiturate Nembutal or Seconal
S—Scopolamine P—Promethazine * Succinylcholine chloride

TABLE 3
TABULAR LISTING OF DATA WHILE ON BYPASS WITH RESULTS

CASE #	BY-PASS TIME	BLOOD PRESSURE*	TEMPERATURES					RESULT
			START	OPEN CHEST	START BYPASS	OFF BYPASS	CHEST CLOSED	
1	.....	.....	....	....	....	....	....	Died before pump
2	29 min.	65 mm Hg	97 F	94 F	95 F	95 F	96 F	Excellent
3	40 min.	80 mm Hg	97	97	95.5	95	97	Died 10 days post-op
4	30 min.	70 mm Hg	98.5	97	96	94	95	Excellent
5	46 min.	62 mm Hg	95	93	95	96	97	Excellent
6	33 min.	83 mm Hg	92	92	92	92	97	Excellent

* Average systolic B.P. while on bypass.

before the first clinical case. This only confirmed the fact that the particular heart lung apparatus used was performing satisfactorily. The Mark G-K machine causes minimal hemolysis. The free plasma hemoglobin levels postoperatively ranged from 50 mg.% to 600 mg.%. No cases of jaundice have appeared in the postoperative period.

DISCUSSION

In the management of anesthesia for cardiopulmonary bypass, it is mandatory to use certain electrical equipment—the Sanborn Twin Viso Recorder, and the Therm-O-Rite unit. Both of these devices serve a vital function but are not con-

structed so as to be explosion proof. The Mark G-K heart lung apparatus is explosion proof except for the modification using heating coils about the oxygenating chamber. Therefore, the use of explosive anesthetic mixtures is interdicted. Fluothane and trichlorethylene, while not capable of exploding under clinical conditions, do not have any place in the anesthetic management of cardiac surgery because of their inherent cardiac toxicity.

For several years, anesthesia for thoracic and cardiac surgery has been successfully conducted, both by the authors and others, using pentothal, nitrous oxide, succinylcholine sequence along with an oral endotracheal technique.⁹ Succinylcholine, though closely fulfilling the needs of the ideal muscle relaxant,¹⁰ is dependent upon cholinesterase hydrolysis for its metabolism. Occasionally, in the debilitated patient, or in one where certain metabolic processes are disturbed, a prolonged apnea is produced even with minimal dosage. This danger is further increased in those cases wherein succinylcholine is used continuously over a prolonged period. Since there is considerable metabolic derangement following cardiopulmonary bypass,^{7,11} the possibility exists that there might be considerable loss in cholinesterase activity. Therefore, it was decided not to use succinylcholine except during the

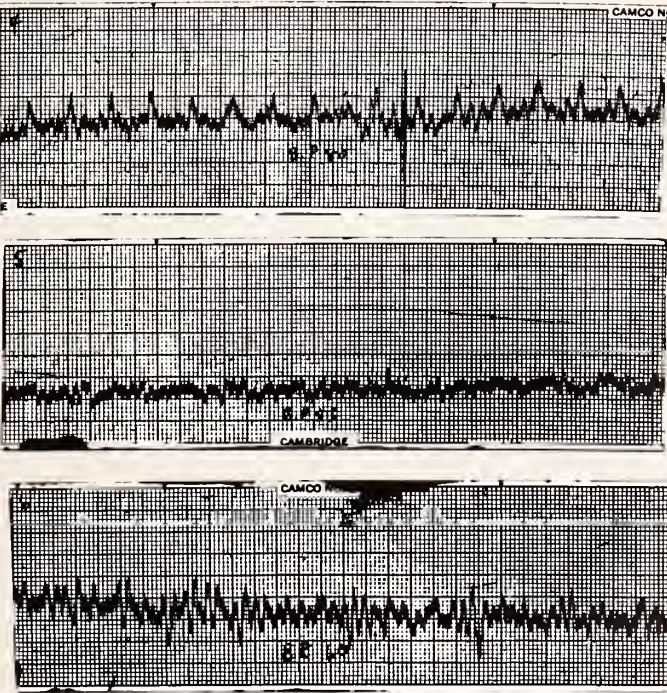


FIGURE 4

Top tracing shows deepening central depression while on total bypass with improvement in middle tracing following an increase in the output by the heart lung apparatus. The oxygen flow to the oxygenating chamber was likewise increased at this time from 10 L/min. to 15 L/min. Lower tracing again shows cerebral depression as total bypass is changed to partial bypass previous to coming off the pump.

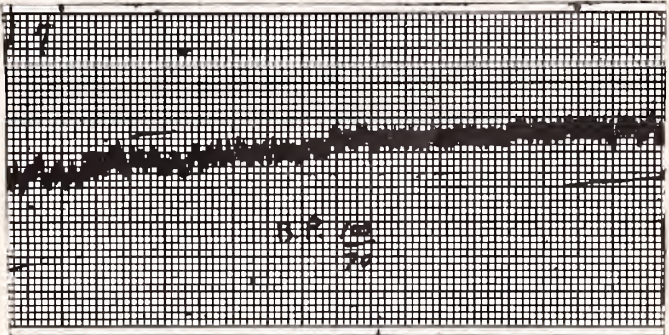


FIGURE 5

The tracing shows the EEG pattern after bypass discontinued. B.P. 100/70. The cerebral electrical output is again consistent with a very light stage of general anesthesia similar to the top tracing in Fig. 3.

induction period. In addition, there is no effective chemical antagonist available. D-tubocurare on the other hand seemed more useful in managing these cases even though it has several disadvantages—histamine release, hypotension, and bronchospasm. However, there is an effective antagonist, edrophonium, available should it be necessary. A pentothal nitrous oxide, curare technique has been shown to be effective and safe in the elderly debilitated patient and certainly such a technique is applicable to a younger patient as is encountered in cardiopulmonary bypass.¹²

Controlled respiration technique has been used throughout surgery, especially when the chest is open, for it offers better working conditions for the surgeon without producing adverse effects upon the patient when correctly applied. To accomplish this, a mechanical breathing device is used with 15 cm. of water positive pressure on inspiration and five cm. of water negative pressure on expiration at a rate of 16-18 per minute with equal time for each phase when the pleura is opened. When the pleura is not open, the pressures are 10 cm. of water on inspiration and expiration respectively. This device is pressure controlled, volume variable and has worked well in our hands though it does have appreciated disadvantages. Its greatest asset lies in the fact that it permits the anesthesiologist to have his hands free to carry out many important tasks associated with anesthesia of this magnitude. However, it is not used in small children in which cases respirations are manually controlled.

In the process of refining surgical technique, experiments were conducted on dogs in the laboratory. It was found that a fairly high incidence of ventricular fibrillation resulted in association with the fall in temperature which invariably occurred when cardiopulmonary bypass was instituted. This fall in temperature in the dogs was expected, inasmuch as blood in the heart lung apparatus was kept at room temperature and pumped into the dog's circulation. The ventricular fibrillation occurred in spite of hyperventilation even though the resulting fall in temperature was only 3-5° F. Increased irritability of the myocardium is a well-known complication of hypothermia.¹¹ However, when attempts were made to keep the dog's temperature as close to normal as possible by keeping the blood at body temperature and using the heating cooling unit, avoiding excessive temperatures so as not to irritate the skin, the incidence of ventricular fibrillation was markedly reduced. This principle was carried over into clinical work using the previously described technique, and the severest arrhythmia seen has been premature ventricular beats. There have been no cases of ventricular fibrillation.

There may be a slight fall in body temperature when bypass is started regardless of the efforts to maintain a near normal temperature. It is felt, however, that this fall is not of the magnitude that would have occurred had not these warming procedures been carried out. To be sure, hypothermia has a place in anesthesia, but it offers the distinct disadvantage of increasing myocardial irritability. It is not needed in the heart lung apparatus employing the high flow principle since blood oxygenation and flow have been proven to be adequate; however, it may be of decided advantage in the management of patients where a low flow technique is used, as has been recently reported.¹¹

As previously mentioned, no attempt is made to oxygenate the blood in the oxygenating chamber of the heart lung apparatus until the patient is ready to go on bypass. There is the distinct possibility that hypersaturating the blood, and particularly the plasma, at the relatively cool temperatures existing outside of the body might result in oxygen embolization once the blood reaches the warmer confines of the patients vascular system. Such embolization conceivably could have a deleterious effect upon the heart after cardiopulmonary bypass was discontinued. Of greater concern is the possibility of immediate and fatal cerebral embolization while on bypass.

When surgery has progressed to the point where the patient is ready to go on bypass, intravenous heparin is administered according to weight as previously mentioned, following which, the internal mammary artery is cannulated for the determination of the arterial blood pressure while on bypass. A catheter of sufficient size is then placed in the subclavian artery. The inferior and superior vena cavae are likewise cannulated through the right auricular appendage. These catheters receive the venous return which ordinarily would flow to the right heart. However, in this instance, the blood flows to the heart lung apparatus by gravity drainage and is ultimately pumped to the oxygenating chamber from which it is pumped into the subclavian artery, finally perfusing the entire arterial system. Eventually the blood reaches the cavae and the cycle is repeated.

When the subclavian and vena cavae cannulae are placed, a state of partial bypass is said to exist as the heart lung apparatus is in part responsible for the patient's circulation even though the heart is still functioning as a pump mechanism. Once the respective catheters are ligated in position, total bypass exists. Only two to three minutes are consumed in this phase of surgery.

Partial bypass is a time of extreme danger because of the associated temporary fall in blood pressure occurring simultaneously with changes in

electroencephalogram indicating an increasing cerebral depression^{2, 11} (Fig. 3 and 4). Fortunately, this period of partial bypass lasts only two to three minutes, and no gross changes have appeared in the patients psyche postoperatively. The precise etiology of the electroencephalographic changes is unknown; however, two factors are likely. First a rise in central venous pressure undoubtedly occurs during partial bypass due to the damming action of the catheter in the superior vena cava especially if the catheter is not as large as the cava is capable of holding. If this is the underlying mechanism, one would expect the electroencephalographic changes to last longer than the duration of partial bypass. These changes, however, are corrected immediately when total bypass is instituted (Fig. 3). In view of this, a second factor may be involved. Perhaps the cerebral depression, as indicated by the encephalogram, is due to the fall in arterial blood pressure which invariably occurs when partial bypass is started.¹¹ It would appear that there is less blood returned to the right side of the heart when the catheters are inserted. With a fall in the output of the right side of the heart, the left heart ultimately receives less blood, and the cardiac output falls with a concomitant fall in the systemic blood pressure.¹³ During partial bypass, the heart lung apparatus provides only a part of the blood flowing in the patient's vascular system. Once total bypass is started, the entire function of the heart as a pump mechanism is taken over by the heart lung apparatus, adequate blood flows through the vascular system and the cerebral depression is corrected. The electroencephalogram at this time reverts back to an appearance commensurate with the very light degree of anesthesia employed in managing these patients.

The electroencephalogram thus serves as a very sensitive mechanism capable of indicating how efficiently the heart lung apparatus replaces the functions of the patients heart and lungs insofar as pumping and oxygenating the blood are concerned. To be sure, we do not know, by this monitoring device, how well CO₂ is being eliminated from the venous blood. However, the work reported by others^{2, 7, 13} and our own laboratory studies indicate that CO₂ retention and respiratory acidosis are not a problem. To the contrary, a respiratory alkalosis is produced which is felt to be desirable since it offers a buffer mechanism for the ensuing metabolic acidosis associated with cardiopulmonary bypass.

If, during total bypass, there are signs of increasing cerebral depression over and above what is expected from the depth of anesthesia, then one can assume that the patient is not receiving flows great enough from the heart lung machine, blood is not being replaced, or that the machine is not adequately oxygenating the blood. The first men-

tioned factor can be eliminated or indicted by simply increasing the output from the machine. Blood loss can be readily checked. If these do not correct the situation, an increase in the flow of oxygen to the screening or oxygenating chamber will usually improve the depressed encephalogram. To be sure, the intraarterial pressure, as recorded through the Statham pressure transducer, is of great help in indicating how well the heart lung apparatus is pumping blood through the vascular system; however, it is prone to dampening and other defects such as clotting of blood in the tubing which requires valuable time to flush out. In addition, the clinical appearance of the patient can be judged according to his color and eye signs. Again, these modalities, especially the degree of cyanosis, are open to interpretation which is not as infallible as the electroencephalogram. Therefore, a suitable operating room electroencephalogram is mandatory in the anesthetic management of cardiopulmonary bypass. Having established adequate brain oxygenation, it is fair to assume that all other vital organs are being adequately perfused with oxygenated blood.

Vasopressors have not been needed during or after bypass nor in the postoperative period. It would seem that there is no place for the use of such drugs unless hypotension is due to a peripheral vasodilatation.

Throughout surgery, the electrocardiogram is likewise monitored. Important as this may be, emphasis is not placed upon it so long as there are no gross deviations from the preoperative tracing except in the repair of interventricular septal defects. In this situation, the development of a bundle branch block or complete A-V dissociation indicates that sutures have been incorrectly placed and these must be removed.

If the surgical technique requires cardiac arrest, then potassium citrate diluted in heparinized blood is injected into the aorta from whence it perfuses the coronary circulation. This is essentially the technique as described by Kolff.¹⁴

The anesthetic techniques and methods described have been satisfactory and no unfavorable complications have resulted which could be attributed to their employment. At all times, the heart lung apparatus has functioned adequately and at no time has it failed to produce adequate blood flow and oxygenation.

SUMMARY

A preliminary report has been made of the anesthetic management of patients in whom cardiopulmonary bypass was employed during open heart surgery. Very light general anesthesia is employed, attaining little more than analgesia, amnesia, and sufficient muscular relaxation to permit surgery.

The use and importance of cardio-encephalographic monitoring has been brought out. The need and means of attaining normothermia likewise were stressed.

ACKNOWLEDGMENT

We owe the deepest appreciation to our resident staff at the Hospital of St. Raphael who assisted us in this investigation, Francis Klimas, M.D., Salvador Felipe, M.D., Italo Mazzarella, M.D., and Edward Knauff, M.D., former resident.

These cases were the private and ward patients of Max Carter, M.D. and George Wilson, M.D. of the Section of Cardio-Thoracic Surgery of the Hospital of St. Raphael.

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Changes in Moles Should Not Be Ignored

Moles, "the commonest of all tumors," seldom cause trouble, but one kind needs careful watching because it may produce "the most malignant of all cancer."

This type is junction nevus. It is described in the current *Today's Health*, published by the American Medical Association.

Some moles may contain certain cells, called "nevus cells" which may predispose to the development of cancer. A mole with these cells is called "junction" because it rises at the junction of the first and second layers of the skin.

Common moles practically never become malignant, the article said. Moles that turn cancerous almost invariably get their start in junction nevi.

Most junction nevi never turn cancerous either, but they may occasionally do so. If there are changes in a mole—deepening in color, increase in size, or noticeably heightened sensitivity—a doctor should be consulted. If he finds the mole to be a junction nevus, then he should remove it—before it has a chance to become malignant.

"The odds are very much against every human being, even the most freckled, having a junction nevus," the article said. "Hence the anxious examination of one's moles is no more to be encouraged than the hourly taking of one's pulse if all else is well.

"But the grave risk of ignoring any changes in the elevation, shape or color or a mole is not to be encouraged either. Let a physician and his laboratory decide. It might be a junction nevus."

Important Fungus Infections In Connecticut†

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IN 1952² the author expressed concern over the fact that many physicians were not aware that mycotic infections should be considered when a diagnosis in many pulmonary and systemic diseases was being made. Since that time, things have changed as is noted by the continual increase in the number of cases referred to our laboratories as well as to other laboratories doing mycological work.

There are, however, certain mycotic infections which some physicians still believe to be rare and most unlikely to be seen in their practices. We would like to comment briefly on these particular infections.

No physician needs to have his attention called to the incidence of "athlete's foot" and tinea capitis, nor to be reminded that *Microsporum audouini*, *Trichophyton mentagrophytes*, and *T. rubrum* are the common etiological agents. Nevertheless, there is one form of dermatophytosis that is often misdiagnosed by the physician who assumes he is dealing with a bacterial infection. This is understandable when one considers the type of lesion seen. Tinea barbae due to *Trichophyton verrucosum* is usually thought to be sycosis vulgaris until laboratory studies include mycological cultures. The lesion involves the deeper layers of the skin and is seen to contain follicular pustules with abscess formation. There is also a good deal of inflammatory reaction. Bacteriological studies will usually reveal staphylococci and thus the diagnosis of sycosis vulgaris. The physician gradually becomes concerned when the patient does not respond well to treatment and eventually a fungus culture may be requested. When the mycologist is made aware of the patient's history special technics are used to isolate *Trichophyton verrucosum*, a fungus requiring thiamine and 37° C. incubation for primary isolation. This is in contrast to the routine procedure for isolating dermatophytes—media without thiamine and incubation at room temperature.

Skin lesions due to this fungus have been seen on other areas of the body including the arms and buttocks. In our laboratory an average of three to four

cases of ringworm due to this fungus are seen each year, all of them being individuals that have had contact with animals—usually cattle. Other laboratories in the state have also had experience with this particular dermatophyte.

In a state that has as much rural area as Connecticut the physician should always keep in mind that many farm animals including cattle, horses, dogs and cats are often infected with dermatophytes which are easily transmitted to man. Cattle are most frequently infected with *Trichophyton verrucosum*.

Sporotrichosis is another mycotic infection not uncommon in Connecticut. The physician usually has little trouble in making the diagnosis if he thinks of it. Primary cutaneous sporotrichosis is acquired when the patient inoculates *Sporotrichum schenckii* directly into the skin, usually by pricking his finger on a plant or piece of wood contaminated with the fungus. This fungus has been isolated repeatedly from nature, usually as a saprophyte on vegetation. Following introduction of the fungus into the lesion a papule develops which gradually enlarges and ulcerates. Often secondary papules may be seen around the periphery of the primary lesion. Approximately 10 days later the patient will develop nodules along the lymphatic channels. These nodules may also ulcerate but the regional lymph nodes, though becoming enlarged, usually do not break down. Although the patient's general health may remain good, unless bacterial infection occurs, the lesions do not completely clear up spontaneously.

Although the lymphatic type of sporotrichosis is the typical form there is another form which is being reported with more frequency. In this latter form one does not see the lymphatic involvement but rather a spreading plaque, often covered with scales or developing into wart-like growths with pustules. This form may be confused with lupus vulgaris or even blastomycosis.

Cultures of purulent material from the lymphangitic form of the disease will readily reveal the fungus although direct microscopic studies are almost invariably negative. This material is best obtained by aspiration from an un-opened nodule,³ in those instances where the lesion is a plaque or wart-like a biopsy may be required. *Sporotrichum schenckii* grows well on the routine mycological

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media within a week. It is recommended that cultures be taken before the patient is started on potassium iodide since they will often yield negative cultures following institution of treatment even though clinically the infection is still present.

It is believed that antibiotics and surgical intervention in sporotrichosis should be avoided if at all possible since there is evidence that the infection may become more serious or even disseminate following their use.

Cryptococcosis is a disease which the physician thinks of in the terms of the typical meningitic form. Although it is true that the meningitic form is the most common, pulmonary and cutaneous cryptococcosis are far more common than the current journals or textbooks would lead one to believe.

Contact with *Cryptococcus neoformans* is believed to be by the respiratory tract. The majority of individuals who come in contact with *Cryptococcus neoformans* develop no symptoms and often it is only when the pathologist is reviewing autopsy tissues from those dying of unrelated causes that any evidence of infection due to this fungus is found.

Pulmonary cryptococcosis is rarely considered unless it is in association with central nervous system symptoms. More than one patient has had a lobectomy performed for carcinoma only to have the histological sections indicate that the lesions are due to cryptococci rather than a neoplasm.

Cutaneous cryptococcosis may be overlooked by the physician either because the early lesions are small or because of their "acneforme" appearance and thus are considered to be bacterial in origin. However, these skin lesions will go on to ulcerate, coalesce, and give rise to large lesions containing purulent material. In many of these cases the diagnosis is accidentally made when a biopsy is done. We have seen two such cases during the past year.

It is well to remember that cutaneous cryptococcosis is almost invariably a result of dissemination from some other site, usually the lung. Patients with cutaneous cryptococcosis should be examined for a systemic infection.

Our thinking with regard to histoplasmosis is constantly changing primarily due to the epidemiological studies being carried out by the United States Public Health Service and to the development of a new histological stain. There is no doubt but that the actual endemic areas for this disease include the valleys of the Mississippi, Missouri and Ohio rivers. However, cases of histoplasmosis have been reported from other areas of the country including Virginia, Pennsylvania, New York, and New Hampshire. The fungus, *Histoplasma cap-*

sulatum, has been isolated from soil, plants, rodents, dogs, and cats. Although we have seen several cases of histoplasmosis in this hospital, the patients have come from areas known to contain the fungus.

There is no reason to assume that the fungus may not exist in Connecticut or other parts of New England. To date no significant epidemiological studies for *Histoplasma capsulatum* have been done in this area.

Although the disseminated form of histoplasmosis is the more dramatic type, the primary, benign pulmonary form is the common one. Due to intensive skin test programs and mycological studies of granulomatous lesions classified as tuberculomas we are finding that the primary form is far more common than suspected.

Many patients having this form of the disease remain asymptomatic or have symptoms typical of a respiratory infection or the "flu." In many of these patients, though asymptomatic, there may be dissemination by way of the blood stream resulting in calcified splenic lesions noted years later.

Recently Grocott¹ modified Gomori's silver stain for the study of fungi in tissue; this stain does not replace the Gridley or periodic acid Schiff stains but should be used in conjunction with them. Roentgenographs of the chest in both the symptomatic and asymptomatic patients reveal multiple calcified lesions usually distributed evenly through both lung fields. Occasionally the primary lesion may be limited to only one or two areas of the lung and thus mistaken for a tuberculous lesion. When such lesions are surgically removed and studied histologically they appear typical of a tuberculoma even though acid fast bacilli are not found. The routine fungus stains are usually negative. However, when they have been restudied with the Grocott stain a large number have been positive for *Histoplasma capsulatum* and are actually histoplasmoses rather than tuberculomas. There is little doubt but that as the use of the Grocott stain increases the recognition of fungi—particularly *Histoplasma capsulatum*—in some of these "tuberculomas" will increase.

The majority of cultures made from patients with the primary pulmonary form of histoplasmosis will be negative; the organism is difficult to grow and the specimens usually contain few or no organisms. The diagnosis is usually made on the basis of positive skin test with histoplasmin, x-ray pictures, and the patient's history. If the infection is seen in the early stage complement fixation tests may be positive.

As in the case with the dermatophytes there is no need to discuss candidiasis. All physicians are fa-

miliar with this infection either as thrush, vulvovaginitis, or as cutaneous lesions. There is still a tendency, however, to interpret as significant any culture of sputum, vaginal secretions, stools, and urine containing *Candida albicans*. This is not correct in many instances, for *Candida* species, in the pathogenic state may also be considered dimorphic, being filamentous rather than a yeast under such conditions. Thus, in order to place more significance on cultures yielding *Candida albicans* it is necessary to demonstrate microscopically filamentous forms of the fungus in the original material. Unless this can be done, there is serious doubt as to whether the culture is revealing anything more than the presence of *Candida* as a saprophyte. It is to be remembered that *Candida albicans* as well as other species of *Candida* are found as part of the normal flora of the mucous membranes, the bowel, and skin. We would also like to reemphasize that *Candida albicans*, though the most common pathogen in the group, is not the only one; *Candida tropicalis* and *C. krusei* also possess the ability to give rise to as serious an infection as is seen with *C. albicans*.

In closing the author would like to comment briefly on the availability of mycological studies to

the physician. Many hospitals, not only in New England, but throughout the country do not have mycologists on their staff; however, they may have a technologist who has been trained in technics for isolation of fungi from pathological materials. Any hospital whose personnel includes a mycologist will always be glad to help those technologists to identify fungi isolated or to serve in an advisory capacity to those requesting help. Our own laboratories receive cultures and communications from many technologists as well as from physicians and veterinarians. We enjoy this because it not only keeps us "on our toes" but also enables us to make our facilities more available to patients through their physicians.

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Wiener Describes New Rh Blood Reaction

An explanation for certain puzzling blood reactions in persons receiving transfusions or having babies was suggested by one of the discoverers of the Rh factor.

Writing in the current *Journal of the American Medical Association*, Dr. Alexander S. Wiener, in collaboration with Dr. Lester J. Unger, explained a new type of Rh reaction.

The Rh factor is a protein substance found in most persons' blood; however, some persons do not have the substance and are said to be Rh-negative. If they receive blood containing the factor, they build antibodies (agents that fight foreign substances in the blood) against the Rh factor. This causes a serious reaction. Reactions may also occur in babies with the factor who are born of mothers without the factor. This condition is known as erythroblastosis fetalis.

Rh reactions have been thought to occur only between Rh-negative and Rh-positive blood in Rh-negative persons.

Now, however, it has been found that blood reactions can occasionally occur in Rh-positive persons. Rh-positive persons have been found to have antibodies against the factor that strongly resemble those found in Rh-negative persons. This "seeming paradox" is explained by the fact that there are at least four Rh factors in normal blood. If a person is missing one of the factors, he may react to blood containing the missing factor by developing antibodies against it.

This knowledge may help solve some of the puzzling problems of erythroblastosis fetalis and transfusion reactions, the doctors said.

They pointed out that the possibilities of such reactions are quite small, since only about 1.6 per cent of Rh-positive Negroes and only about 0.1 per cent of Rh-positive Caucasians would be missing any of the factors.

On The Social Responsibility Of The Medical Profession

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"HEALTH is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity." This definition of health was adopted by 64 nations at the constitution of the World Health Organization. It brings attention to the importance of social well being in the total concept of health.

It is the primary function of doctors to relieve human suffering; the suffering caused by physical, mental, and now by social disease. This necessitates a widening of outlook to encompass the protective and therapeutic measures which can be applied to these three areas, and an increased awareness of the major health hazards in each of them. While the recognition and treatment of disease is uppermost in our minds, we must nevertheless be conscious of the preventive aspects of medicine, since to quote a well worn adage, "Prevention is better than cure." Our title indicates, in fact, that we are or should be teachers.

COMBATTING PHYSICAL DISEASE

The application of the principles of preventive medicine is firmly established in the area of physical illness, particularly for communicable diseases, and many of these are being eradicated. There are several different levels of organization at which an approach can and should be made. These begin on an individual basis and rise through community measures to social and cultural levels. For example, take the case of smallpox. The individual diagnosis and treatment would be relatively ineffective without the public health measures of education, isolation, and vaccination. This again would be rendered much less effective if not combined with the international measures of supervision and control. Indeed, the limitation of this disease is due largely to such international control. It is important now to progress to other aspects of physical disease such as chronic illnesses and also to mental disease.

Preventive psychiatry is in its infancy but the problem can again be approached on several levels: individual, community, social, and cultural. While in this area the ground is much less well defined, there should be a greater effort to spread what knowledge we do have about the principles of mental hygiene on a wider scale and the pressure behind such programs should come from doctors because of their implicit obligations towards community health. In particular today is the urgent

need to apply mental hygiene principles in preparing people for old age. This is a field of immediate application and great importance which has been left virtually untouched.

AREAS OF SOCIAL DISEASE

The ground becomes less well defined when we come to social disease, but there is obviously a close relationship between this area and mental disease because many mental disorders express themselves in socially unhealthy ways, and conversely social ills can be reflected in both mental and physical illnesses. At this point it becomes apparent that the three areas—physical, mental and social—are indissolubly and complexly interrelated and that our thinking must encompass all three in order that an effective battle for health may be waged.

A battle at different levels of organization can also be fought for social ill health. At an individual level is the early recognition and treatment of the socially unhealthy. This often means, of course, the mentally unhealthy but largely those who are mentally ill in more subtle ways than the overt psychotic or neurotic patient. It is predominantly those with so-called psychopathic characteristics and those otherwise well adjusted people with neurotic drives towards such ends as prestige and power who present the biggest problems in the social area, and it is exactly these people for whom there is inadequate provision today. These people can cause a large amount of human suffering and the community needs protection from them just as it does from an infectious disease.

On the other hand, many people feel that social problems cannot be solved at an individual level and that one cannot argue from individual abnormalities to social abnormalities. For example, the work of Shaw and Sutherland suggested that crime is not a psychological disorder but is a sign of social dislocation. The Cambridge Somerville study on juvenile delinquency suggested that attempts to influence a group or society through the individual may be futile, while the "Back of the Yard" movement showed how this problem could be met using organized community resources. This indicates the need for the establishment of principles which apply to each level of organization and not the simple transference of principles applying at a lower level to a higher. Just as the principles of reflex theory suffice for simple levels of nervous organization and are insufficient to account for the complex behavior at a cortical level, so the principles applying to in-

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dividuals may be insufficient when applied to societies or cultures. It is clearly not possible to decide at the present time on the relative influence of the culture in producing maladjustments or the influence of the sick individual on the cultural pattern. This problem is closely related to the problem of whether or not the course of history is, in fact, shaped by individuals or is determined by the masses. There are certainly many instances of ideas not being acceptable at one time becoming acceptable at a later date. This suggests some determining power by the cultural structure in which the ideas are embedded.

IS OURS A GOOD SOCIETY?

In spite of this complex interrelationship the problems should be approached at both levels of organization. This means that attempts to improve cultural ideals and aims together with social standards and objectives will be combined with the attempt to improve the individual's health in the physical, mental, and social spheres. It is not a question of altering the culture or the individual but of treating each of them for the benefit of the other. In other words, we not only need to try and adjust people to our society but also need to ask whether it is a good society to be adjusted to. Does it have healthy aims and values? If not, then it is diseased and a potential source of ill health for its members. It becomes a duty to examine our society for poor values just as it is necessary to examine it for poor sanitation.

It is not the place here to examine and diagnose abnormalities in social systems, but it would appear that there are some which require attention if we are to have a healthy society. We can learn sometimes from other cultures. For example, the Zuni Indians of New Mexico have some values which could well be given a therapeutic trial. In this culture competition exists more in the performance of group projects and competition for individual gain is discouraged. The highest prestige is given to socially useful tasks. A second point of attack could be the socioeconomic and cultural attitudes to old age. It is most important to approach this problem at this level as well as by the improvement of individual mental hygiene. Many of the problems of old age would appear to be a direct consequence of such pathogenic socioeconomic attitudes.

INCREASE IN HEALTH HAZARDS

Besides this influence of the cultural design as a whole on the individual, there are other major health hazards in the social sphere which are of steadily increasing importance. These are motor vehicle accidents and other forms of accidental deaths such as burns and poisoning from drugs. These should theoretically be capable of resolution

utilizing social therapeutic techniques such as education and legislation. The greatest potential health hazard in this sphere, of course, is war which, with its tremendous increase in destructiveness, threatens not only untold human suffering but also the possible extinction of the human race itself. Again there is the part played by sick individuals such as power-greedy dictators and the part played by cultural, social, and economic circumstances. Both require early recognition and treatment. The more really healthy, and in particular socially healthy, people there are in healthy societies, the less likely war will be.

It is no longer feasible for doctors to restrict their aims to individual therapy and to bury their heads in the sand with regard to economic and social developments. The practice of medicine must in the future be more integrated with such developments, since the isolated development of medicine could conceivably do more harm than good. For example, the eradication of a disease in certain areas may suddenly create enormous problems such as the question of food supply. A population suddenly made healthy in an undeveloped country will find no work for its members, creating unhealthy social and economic stresses.

This problem of integration between different fields is an enormous one today, particularly with increasing specialization. The answer may be the setting up of professorial chairs specifically for such integration, to be filled by persons with training in two or more fields and having the necessary synthetic type of mind. If this does not happen, one can foresee a time when there will be a beautiful understanding and analysis of many tiny parts but no one who can put the bits back together again to make the thing run. There is also the difficulty of communication between these different specialties and the need for interspecialty interpreters—not just on account of the volume of the work produced but also because of the increased technicality of the language involved.

To sum up, a doctor's concern is with health and his objective should be a healthy person living in a healthy society. There is interaction between the two and one is not possible without the other. There is, thus, a great social responsibility resting upon doctors today—not just as responsible citizens but because of the intimate role society plays in health and health plays in society.

REFERENCES

1. Linton, R.: *Culture and Mental Disorders*, ed. Devereux, G., Thomas, C. C., 1956.
2. Powers, E. and Witmer, H.: *An Experiment in the Prevention of Delinquency. Cambridge—Somerville Youth Study*, New York. Columbia University Press, 1951.

relieve the tension



-and control its G.I. sequelae



Patient A.S., age 53.
Intermittent crises of severe pain over 2 year period; hospital management with Sippy regimen provided relief of symptoms; however, symptoms recurred after each sojourn.



*PATHIBAMATE (Tabs. *j.t.i.d.* and H.S.); prompt relief of symptoms. Radiograph (21 days later) confirms healing of minute lesser curvature gastric ulcer crater.*

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of tension and
G.I. trauma

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LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

167th ANNUAL MEETING
of the
CONNECTICUT STATE MEDICAL SOCIETY

HAMDEN HIGH SCHOOL

2040 Dixwell Avenue, Hamden, Connecticut

April 28, 29, 30, 1959

PROGRAM COMMITTEE

WILLIAM J. LAHEY, *Hartford, Chairman*

ORVAN W. HESS, *New Haven*

J. FORBES ROGERS, *Stamford*



WILLIAM J. LAHEY



CHARLES C. VERSTANDIG

LOCAL COMMITTEE ON ARRANGEMENTS

CHARLES C. VERSTANDIG, *New Haven, Chairman*

JOHN BURBANK, *Meriden*

CHARLES L. LARKIN, JR., *Waterbury*

HYMAN A. LEVIN, *New Haven*

JOHN C. MENDILLO, *New Haven*

PROGRAM

Tuesday, April 28

AUDITORIUM

ANNUAL MEETING OF THE HOUSE OF DELEGATES

THOMAS M. FEENEY, *Hartford, Speaker of the House, presiding*

10:00 CALL TO ORDER
BUSINESS SESSION

1:00 LUNCHEON FOR OFFICERS, MEMBERS OF THE HOUSE AND GUESTS

2:00 RESUMPTION OF BUSINESS

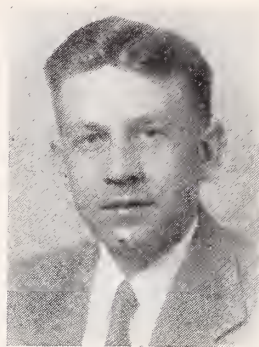
7:00 ANNUAL DINNER OF THE COUNCIL—The Council will hold its annual dinner for the Program Committee, the Local Committee on Arrangements, and guests at the Colonial House, Hamden



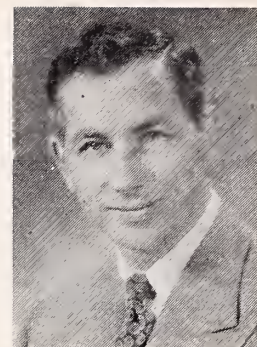
HAMDEN HIGH SCHOOL



MAX MILLER
Cleveland



FRANKLIN A. NEVA
Boston



MONROE J. ROMANSKY
Washington, D. C.

Wednesday, April 29

9:00 REGISTRATION—Exhibit Hall

AUDITORIUM

9:15 CALL TO ORDER—Walter I. Russell, *New Haven, President of the Society*

ADDRESS OF WELCOME—*President, New Haven County Medical Association*

WILLIAM J. LAHEY, *Hartford, presiding*

9:45 ORAL HYPOGLYCEMIC AGENTS IN DIABETES MELLITUS

MAX MILLER, *Cleveland; Associate Professor of Medicine, Western Reserve University; Associate Physician, University Hospitals of Cleveland*

10:30 CLINICAL IMPORTANCE OF THE NEW VIRUS DISEASES

FRANKLIN A. NEVA, *Boston; Associate Professor of Tropical Public Health, Harvard School of Public Health; Clinical Assistant in Medicine, Harvard Medical Services, Boston City Hospital*

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

HUGH L. DWYER, *New Haven, presiding*

11:40 ANTIBIOTICS—USE AND ABUSE

MONROE J. ROMANSKY, *Washington, D. C.; Professor of Medicine, George Washington University School of Medicine; Chief, George Washington University Medical Division, District of Columbia General Hospital; Consultant in Antibiotics and Internal Medicine, Walter Reed Army Hospital*

12:20 CANCER IN CHILDREN—RESEARCH, DIAGNOSIS AND TREATMENT

SIDNEY FARBER, *Boston; Professor of Pathology, Harvard Medical School at the Children's Hospital; Director of Research, The Children's Cancer Research Foundation*

1:00 LUNCHEON—CAFETERIA OF THE HIGH SCHOOL

INTERMISSION TO VISIT TECHNICAL EXHIBITS

GERALD KLATSKIN, *New Haven, presiding*

2:00 THE PLACE OF SERUM ENZYME DETERMINATIONS IN DIAGNOSIS AND TREATMENT

JOHN S. LADUE, *New York; Associate Professor of Clinical Medicine, Cornell University Medical College; Section Head, Department of Cardiology, Sloan-Kettering Institute at Memorial Center*

2:40 CURRENT CONSIDERATIONS IN THE MANAGEMENT OF CHRONIC RELAPSE IN PANCREATITIS

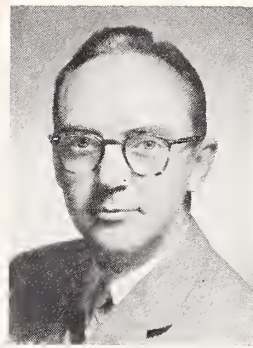
KENNETH W. WARREN, *Boston; Surgeon, Lahey Clinic, New England Baptist Hospital, New England Deaconess Hospital*



SIDNEY FARBER
Boston



JOHN S. LADUE
New York



KENNETH W. WARREN
Boston

Wednesday, April 29

MEETINGS OF SECTIONS OF THE SOCIETY AND GUEST ORGANIZATIONS

WOMAN'S AUXILIARY TO THE CONNECTICUT STATE MEDICAL SOCIETY

FIFTEENTH ANNUAL MEETING

SANFORD BARN, HAMDEN

President: Mrs. Charles Murray Gratz, *Greenwich*

Secretary: Mrs. John Bucciarelli, *New Canaan*

10:00 Registration

10:30 Business Meeting

Election of Officers

Memorial Service—Mrs. Edwin R. Connors, *Bridgeport*

12:00 Social Hour

1:00 Luncheon

Introduction of Guests

GUEST SPEAKER

HERBERT J. KRAMER, *Ph.D.*, Assistant Manager of the Public Information and Advertising Department of the Travelers Insurance Company

"THE PHYSICIAN AS PORTRAYED IN MODERN LITERATURE"

3:00 Induction of Officers

Presentation of President's Pin—Mrs. Charles Murray Gratz, *Greenwich*

Response by Incoming President—Mrs. Walter Nelson, *Cromwell*

Adjournment

SECTION ON DERMATOLOGY AND SYPHILOLOGY

3:30 Room 108

President: Ellwood C. Weise, Jr., *Bridgeport*

Secretary: Cleveland R. Denton, *Hartford*

COSMETICS: THE DERMATOLOGIST'S RESPONSIBILITY TO THE PRODUCT, THE PATIENT, AND THE PROFESSION

HERBERT SPOOR, *New York*; Staff of New York Hospital and Cornell University Medical College

SECTION ON GASTROENTEROLOGY

3:30 Room 101

President: Sydney Selesnick, *West Haven*

Secretary: Frank K. Abbot, *Waterbury*

MALNUTRITION IN MALABSORPTION

C. WILMER WIRTS, *Philadelphia*; Associate Professor of Medicine, Jefferson Medical School; Immediate Past President of American College of Gastroenterology

FRANK BORELLI, *New York*; Professor of Radiology, Flower and Fifth Avenue Hospital; President American College of Gastroenterology

HOWARD M. SPIRO, *New Haven*; Assistant Professor of Medicine, Yale University School of Medicine

COURTNEY C. BISHOP, *New Haven*; Associate Professor of Surgery, Yale University School of Medicine

Wednesday, April 29

SECTION ON PHYSICAL MEDICINE

3:30 Auditorium

President: Bruno Arnold, *New Haven*Secretary: Otto Goldkamp, *Hartford*

FUNCTIONAL BRACING OF THE UPPER EXTREMITY

JOHN C. ALLEN, *Hartford; Director, Physical Medicine, Hartford Hospital*

SECTION ON UROLOGY

3:30 Room 104

President: Harry R. Newman, *New Haven*Secretary: B. Marvin Harvard, *New Haven*

EXPERIENCE WITH VARIOUS METHODS OF URINARY DIVERSION

WILLET F. WHITMORE, JR., *New York; Attending Surgeon, Urologic Service, Memorial Center for Cancer and Allied Diseases, New York*

JOINT MEETING

CONNECTICUT ALLERGY SOCIETY

President: Maurice M. Hillman, *New Haven*Secretary: Marvin Mogil, *New Haven*

and

HEZEKIAH BEARDSLEY PEDIATRIC CLUB

President: Abe S. Brown, *Waterbury*Secretary: Thomas A. Monagan, *Waterbury*

3:30

Cafeteria

VARIOUS OBSERVATIONS ON ALLERGIC CHILDREN

LEWIS WEBB HILL, *Boston; formerly Lecturer in Pediatrics, Harvard Medical School; Director of Allergy Clinic of Children's Medical Center*

The Hezekiah Beardsley Pediatric Club will hold its annual business meeting following this session

CONNECTICUT ASSOCIATION OF MEDICAL RECORD LIBRARIANS

9:00

Room 103

President: Anne Sawchak, *West Haven*Secretary: Sally MacVarish, *New Haven*

9:00 Registration

9:30 Business Meeting

Jean Feindt, *Hartford Hospital, presiding*

10:45 DO THE HOSPITAL ADMINISTRATORS AND THE MEDICAL RECORD LIBRARIANS UNDERSTAND EACH OTHER? WHAT EACH EXPECTS OF THE OTHER.

ERNEST C. SHORTLIFFE; *Associate Executive Director, Hartford Hospital*MISS FLORENCE M. FITZGERALD; *Chief, Medical Record Librarian New Britain General Hospital*
Discussion

12:15 Group Lunch

Patricia Tourey, *New Haven, Vice President, presiding*

2:00 DISASTER PROGRAM AND THE MEDICAL RECORDS LIBRARIAN RESPONSIBILITY

HANS N. LOVIG; *Administrator, Day Kimball Hospital, Putnam; Chairman, Committee on Disaster Planning, Connecticut Hospital Association*JANET D. FRAZER; *Middlesex Hospital, Middletown*EDITH M. TRACEY; *Waterbury Hospital, Waterbury*

3:30 RECENT ADDITIONS TO STANDARD NOMENCLATURE

Wednesday, April 29

CONNECTICUT CHAPTER OF NATIONAL ASSOCIATION OF SOCIAL WORKERS
MEDICAL SOCIAL WORK SECTION

3:30 Room 110

Chairman: Josephine Verrengia, *Hartford*

Secretary: Charlotte Koff, *Hartford*

"COMMEMORATING ITS 20TH YEAR AS GUEST ORGANIZATION"

Presiding: Miss Theodate H. Soule, *Director of Social Service, New York Hospital*

A MODERN VIEW OF PROLONGED ILLNESS

E. M. BLUESTONE; *Consultant, Montefiore Hospital, New York*

CONNECTICUT CHAPTER—AMERICAN PHYSICAL THERAPY ASSOCIATION

12:45 Sanford Barn, Hamden

President: Wilhelmina J. Werkhoven, *Ellington*

Secretary: Marilyn Marchant, *Glastonbury*

THE ANATOMY OF THE NECK

WAYNE O. SOUTHWICK; *Chief of Orthopedic Service, Yale-New Haven Medical Center*

The group will join the Section on Physical Medicine in the Auditorium of the Hamden High School at 3:30 P.M.

CONNECTICUT DIABETES ASSOCIATION

3:30 Room 105

President: William M. Shepard, *Putnam*

Secretary: James C. Hart, *Hartford*

THE ROLE OF "TIGHT CONTROL" IN THE PREVENTION OF COMPLICATIONS IN DIABETES

PHILIP K. BONDY; *Associate Professor of Medicine, Yale University School of Medicine*

ANNUAL DINNER OF THE SOCIETY

NEW HAVEN LAWN CLUB

193 Whitney Avenue

New Haven, Connecticut

7:00

PROGRAM

WALTER I. RUSSELL, *New Haven, presiding*

INTRODUCTION OF NEWLY ELECTED OFFICERS

PRESENTATION OF GUESTS AND DELEGATES FROM STATE MEDICAL SOCIETIES

FIFTY YEAR MEMBERSHIP AWARDS

Charles Levi Dichter, *Stamford*

Joseph Napoleon Perreault, *Danielson*

Frank Lyman Phillips, *New Haven*

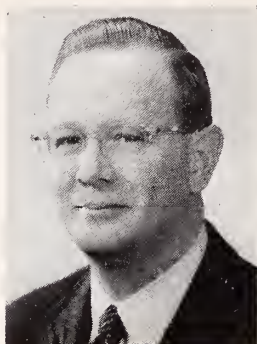
Charles Harry Sprague, *Bridgeport*

PROGRAM TO BE ANNOUNCED

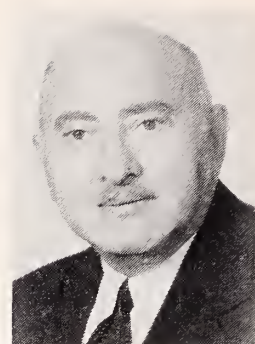
Reservation cards for the Annual Dinner will be included with the program of the meeting which will be distributed to all members; wives of members are invited to attend.



ROBERT R. LINTON
Brookline



ALFRED S. FROESE
Philadelphia



MORTIMER D. SPEISER
New York

Thursday, April 30

9:00 REGISTRATION—Exhibit Hall

AUDITORIUM

9:15 REPORT ON THE WORLD MEDICAL ASSOCIATION

WILLIAM M. SHEPARD, *Putnam*

J. FORBES ROGERS, *Stamford*, presiding

9:45 THE USE OF ENZYMES AND ANTI-INFLAMMATORY DRUGS IN SURGICAL DISEASE

EUGENE E. CLIFFTON, *New York*; Associate Professor of Clinical Surgery, Cornell University Medical College; Associate Attending Surgeon, New York Hospital; Associate, Sloan-Kettering Institute

10:30 MANAGEMENT OF THE PATIENT WITH PERIPHERAL OBLITERATIVE ARTERIAL DISEASE

ROBERT R. LINTON, *Brookline*; Assistant Clinical Professor of Surgery, Harvard Medical School; Visiting Surgeon, Massachusetts General Hospital

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

ORVAN W. HESS, *New Haven*, presiding

11:40 NEW TRENDS IN MANAGEMENT OF DIVERTICULITIS

ALFRED S. FROESE, *Philadelphia*; Associate Professor of Surgery, University of Pennsylvania Graduate School of Medicine; Associate Surgeon, Graduate Hospital, Philadelphia

12:20 COMMON VULVAR DISEASES

MORTIMER D. SPEISER, *New York*; Clinical Professor of Obstetrics and Gynecology, New York University College of Medicine; Attending Obstetrician and Gynecologist, Bellevue Hospital

1:00 LUNCHEON—CAFETERIA OF THE HIGH SCHOOL

INTERMISSION TO VISIT TECHNICAL EXHIBITS

PROGRAM ARRANGED BY THE CONNECTICUT SOCIETY OF AMERICAN BOARD SURGEONS

President: Mark A. Hayes, *New Haven*

Secretary: Eugene J. Fitzpatrick, *New Haven*

Program Chairman: Ira S. Goldenberg, *New Haven*

2:00 SYMPOSIUM—UPPER GASTROINTESTINAL HEMORRHAGE

Chairman: PAUL D. ROSAHN, *New Britain*, Pathologist, New Britain General Hospital; Associate Clinical Professor, Pathology, Yale University School of Medicine

Panel: GILBERT W. HEUBLEIN, *Hartford*; Associate Radiologist, Hartford Hospital

SAMUEL D. KUSHLAN, *New Haven*; Associate Clinical Professor, Medicine, Yale University School of Medicine

W. W. LINDEMUTH, *New Haven*; Chief Surgical Service, Veterans Administration Hospital, West Haven; Associate Professor, Surgery, Yale University School of Medicine

HOWARD W. SMITH, *New Haven*; Clinical Instructor, Otolaryngology and Dental Surgery, Yale University School of Medicine

Thursday, April 30

MEETINGS OF SECTIONS OF THE SOCIETY AND GUEST ORGANIZATIONS

SECTION ON ANESTHESIA

3:30 Room 108

President: Gerald J. Carroll, *Norwich*

Secretary: Edward J. Platz, *Manchester*

PROGRAM TO BE ANNOUNCED

EYE, EAR, NOSE AND THROAT SECTION

3:30

Chairman: Henry L. Haines, *New London*

Secretary: John P. Simses, *Bridgeport*

(There will be two separate programs, one for the Eye Group and one for the Ear, Nose and Throat Group)

Eye Section—Room 105

OPHTHALMIC PLASTIC SURGERY

BYRON SMITH; *Surgeon Director, Eye Plastic Service, Manhattan Eye, Ear, and Throat Hospital, New York*

ENT Section—Room 103

VOCAL REHABILITATION IN FUNCTIONAL DISORDERS AND BENIGN LESIONS OF THE VOCAL CORDS

FRIEDRICH S. BRODNITZ; *Senior Clinical Assistant in Otolaryngology, Mt. Sinai Hospital, New York*

6:30 Section Dinner—Waverly Inn, *Cheshire*

JOINT MEETING

SECTION ON OBSTETRICS

President: Hugh K. Miller, *Stamford*

Secretary: Joseph Klein, *Hartford*

CONNECTICUT SOCIETY OF AMERICAN BOARD OBSTETRICIANS AND GYNECOLOGISTS

President: Louis F. Middlebrook, *Hartford*

Secretary: Joseph Klein, *Hartford*

3:30 Auditorium

MEDICAL AND SURGICAL COMPLICATIONS OF PREGNANCY

SAMUEL A. COSGROVE; *Attending Obstetrician, Margaret Hague Hospital, New Jersey; Chairman and Professor of Obstetrics and Gynecology, Seton Hall College of Medicine and Dentistry*

CONNECTICUT OCCUPATIONAL THERAPY ASSOCIATION

2:30 Cafeteria

President: Bess Lande, *New Haven*

Secretary: Irene Obrock *New Haven*

RESPONSIBILITIES FOR OCCUPATIONAL THERAPY WITH CHANGING CONCEPTS

IRA V. HISCOCK; *Professor and Chairman of Public Health, Yale University*

Thursday, April 30**JOINT MEETING
SECTION ON RADIOLOGY**

President: Robert Shapiro, *New Haven* Secretary: Ralph J. Littwin, *Bristol*

SECTION ON ORTHOPEDICS

President: Russell V. Fuldner, *New Haven* Secretary: Edmund R. Zaglio, *Manchester*

CONNECTICUT SOCIETY OF PATHOLOGISTS

President: Christie E. McLeod, *Middletown* Secretary: George B. McAdams, *Hartford*

New Haven Medical Library, 364 Whitney Avenue, New Haven

4:00 Film Reading Session

5:00 Social Hour

6:30 Dinner

7:30 Speaker—ERNEST AEGERTER; *Professor of Pathology, Temple University Medical School, Philadelphia*

Topic—"Bone Tumors"

CONNECTICUT DISTRICT BRANCH OF THE AMERICAN PSYCHIATRIC ASSOCIATION

3:30 Room 101

President: Sidney Berman, *New Haven* Secretary: Elias J. Marsh, *Hartford*

PSYCHIATRIC DAY HOSPITALS

CHARLES E. GOSHEN; *American Psychiatric Association, Washington, D. C.*

ASSOCIATION OF MEDICAL EXAMINERS

3:30 Room 104

President: Samuel B. Rentsch, *Derby* Secretary: Edwin R. Connors, *Bridgeport*

PROGRAM TO BE ANNOUNCED**ART EXHIBIT
CONNECTICUT PHYSICIANS' ART ASSOCIATION****Co-Chairmen**

John M. Freheit, *Waterbury*
Mrs. Orvan W. Hess, *North Haven*

The 1959 exhibit of the Connecticut Physicians' Art Association will be held during the Annual Meeting on the balcony overlooking the exhibit hall of the Hamden High School. Members of the Woman's Auxiliary to the Society will participate in the exhibit and children of members of the Society are also invited to submit entries.

Exhibits 1959 Annual Meeting

<i>Space</i>	<i>Firm</i>	<i>Location</i>
1	E. R. Squibb & Sons	New York, N. Y.
2	Pepsi-Cola Bottlers Association of Connecticut	Fairfield, Conn.
3	The American Surgical Supply & Equipment Company	Bridgeport, Conn.
4	Organon Incorporated	Orange, N. J.
5	Ciba Pharmaceutical Products, Inc.	Summit, N. J.
6	W. B. Saunders Company	Philadelphia, Pa.
7	Schieffelin & Company	New York, N. Y.
8	Geigy Pharmaceuticals, Div. of Geigy Chemical Corp.	Yonkers, N. Y.
9	Schering Corporation	Bloomfield, N. J.
10	Ortho Pharmaceutical Corporation	Raritan, N. J.
11	Desitin Chemical Company	Providence, R. I.
12	Pfizer Laboratories	Brooklyn, N. Y.
13	The S. E. Massengill Company, Inc.	New York, N. Y.
14	Merck Sharp & Dohme, Div. of Merck & Company, Inc.	Philadelphia, Pa.
15	C. B. Fleet Company, Inc.	Lynchburg, Va.
16	The Professional Equipment Company	New Haven, Conn.
17	The D. G. Stoughton Company	Hartford, Conn.
18	Sandoz Pharmaceuticals	Hanover, N. J.
19	Arthur W. Eade Insurance Agency	New Haven, Conn.
20	Wampole Laboratories	Stamford, Conn.
21	A. H. Robins Company, Inc.	Richmond, Va.
22	The Upjohn Company	Kalamazoo, Mich.
23	R. J. Reynolds Tobacco Company	Winston Salem, N. C.
24	The National Drug Company	Philadelphia, Pa.
25	The Wm. S. Merrell Company	Cincinnati, Ohio
26	Abbott Laboratories	No. Chicago, Ill.
27	J. B. Roerig and Company	New York, N. Y.
28	E. Fougera & Company, Inc.	Long Island, N. Y.
29	The Stuart Company	Pasadena, Calif.
30	The Purdue Frederick Company	New York, N. Y.
31	Burroughs Wellcome & Company, (U.S.A.) Inc.	Tuckahoe, N. Y.
32	U. S. Vitamin Corporation	New York, N. Y.
33	The Baker Laboratories, Inc.	Cleveland, Ohio
34	Surgeons & Physicians Supply Company	Boston, Mass.
35	Ayerst Laboratories	Little Falls, N. J.
36	Westwood Pharmaceuticals	Buffalo, N. Y.
37	Sherman Laboratories	Detroit, Mich.
38	Seven-Up Bottling Company	East Hartford, Conn.
39	Eli Lilly and Company	Indianapolis, Ind.
40	The Coca-Cola Company	Atlanta, Ga.
41	Smith Kline & French Laboratories	Philadelphia, Pa.
42	Mead Johnson & Company	Evansville, Ind.
43	Connecticut Medical Service, Inc.	New Haven, Conn.
44	Thermo-Fax Sales of Connecticut, Inc.	Hamden, Conn.
45	Brewer & Company, Inc.	Worcester, Mass.
46	The Borden Company	New York, N. Y.
47	G. D. Searle & Company	Chicago, Ill.
48	Milex of New York	Long Island City, N. Y.
49	E. F. Mahady Company	Cambridge, Mass.

Exhibit Decorator

Robert E. Stacy, 1090 Page Boulevard, Springfield, Massachusetts

HAMDEN — OUR HOST

Hamden more than any other suburb of New Haven houses the working population of New Haven. And because it is so lacking in any well defined lines of separation from New Haven there is an increasing tendency for the expanding New Haven industrial and commercial organizations to move their plants to that town to take advantage of the wide spaces still available.

In keeping with this exodus of people and plants to this suburb the rate of growth in population and property values is tremendous while the city of which it was once a part seems to remain stationary.

The visitor to the New Haven area of which Hamden is a part will be impressed however by the vast redevelopment now going on in New Haven through which it is hoped the strangulation cords of haphazard development of a previous age will be cut and permit a rebirth from which new growth can start.

This redevelopment which has captured the interest of the entire country by its courageous daring to disrupt the industrial and commercial sections of the city in an endeavor to meet the needs of the present and to permit growth in the future should be of interest to anyone living in a community of carriage age development and it is hoped that the medical visitor to this area will take the opportunity to see what is being done in New Haven.

It is to be regretted that it was not possible to arrange for this meeting of the Connecticut State Medical Society in one of the two new modern high schools in New Haven but the unexcelled facilities of the Hamden High School for our meetings, the convenience of its location to members coming from all parts of the State, the amplitude of its parking facilities and the gracious hospitality of town authorities and the people, make it an ideal center for our needs.

Hamden though having a population in excess of 40,000, and therefore larger than many cities, still retains the town form of government. Its various area developments makes it a town of several communities:—Spring Glen, Whitneyville, Centerville, Mount Carmel and Dixwell Avenue.

The excellence of its schools as well as that of its fire department and police department has been a factor in the town's growth.

Although the name of Eli Whitney is identified with New Haven, Whitney was a resident of Hamden and in addition to the invention of the cotton gin for which he is famous, he was probably the father of mass production which he used in the manufacture of rifles for the U.S. Government.

It is interesting to note that in 1788 only two

years after the town was incorporated the Doctors Aaron and Joseph Eliot sought to set up a hospital but were refused permission by the town committees.

Much could be written about the advantages of this town but one has only to ride through its broad thoroughfares and note the neatness of its streets and the beauty of its houses to satisfy himself that Hamden is a desirable place in which to live.

Smith, Kline & French's Boyer Is Chairman of Medical Mission Fund

Francis Boyer, president of Smith Kline & French, has accepted chairmanship of board of directors of People to People Health Foundation, Inc. Other board members named to date include John T. Connor, president, Merck & Co.; Frank Pace, former Secretary of Army, and Dr. Elmer Hess, former president of AMA. PPHF, Inc., is the newly organized tax-exempt foundation conceived by Dr. William Walsh, Washington internist, to send a floating medical center on a goodwill mission to Southeast Asia.

Since President Eisenhower has indorsed this project and pledged transfer of the hospital ship USS Consolation to PPHF, Inc., government officials are reluctant to discuss the undertaking for quotation. They wonder how planning could have gone so far without a single country's having invited the ship to put into port; whether this is to be a permanent thing and, if not, whether the cutoff will undo whatever good has been accomplished politically; if drug companies' financial support will be at expense of National Fund for Medical Education.

The big public relations firm of Hill & Knowlton is publicizing Project Hope—Health Opportunity for People Everywhere—as a public service. Note: Its dental curriculum committee is composed of Drs. Lester W. Burke, Philadelphia; Obed H. Moen, Watertown, Wis., and Harry Lyons, Richmond, Va.

Upjohn Gets Contract To Test Cancer Drugs

Dr. Leroy E. Burney, Surgeon General of USPHS, has announced award of \$505,000 contract to Upjohn Co. to develop, test and produce antibiotics and other drugs possibly effective in treatment of cancer. It is the first contract to be awarded under new patent policy of Department of HEW, permitting the contractor to patent and sell drugs or other chemical substances developed under government contract.

CONNECTICUT MEDICINE

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The Post Myocardial Infarction Syndrome

We have become somewhat uncritical in the pursuit of anti-coagulation therapy. The pendulum seems to have swung away from early caution to almost complete routine acceptance. There is both logic and statistical support for anti-coagulation therapy in acute myocardial infarction. Although we cannot prove with certainty there is a thrombus involved in any individual patient stricken with acute myocardial infarction it has been considered safer to treat such a patient as if a thrombus were present. With heparin intravenously there is always the possibility of intravascular fibrinolysis as well as prevention of the extension of a clot already there. However, after 10 days to two weeks it may be presumed the remaining portion of the thrombus has been epithelialized over and the probability of its propagation practically eliminated. At this time a decision needs to be made whether anti-coagulation as a treatment is given temporarily to prevent further thrombosis intramurally or in the peripheral venous system; or whether it is to be continued indefinitely.

It is at this point one must think of the post-myocardial infarction syndrome, a complication of acute myocardial infarction which mimics both the post-commissurotomy syndrome and idiopathic pericarditis. If this condition develops anti-coagulation therapy is dangerous. The complication was previously often mistaken for recurrent myocardial or pulmonary infarction, since its chief features are fever, chest pain, evidence of pericarditis, pleurisy, pneumonitis and a tendency to recurrence. It is readily distinguished from "pericarditis episteno-cardica", by longer duration of fever and chest pain in the initial period of illness and by relapses of fever and pleuro-pericardial pain. The syndrome is readily distinguished from extension of myocardial infarction by the pleuro-pericardial character of the pain and the absence of additional changes in the electrocardiogram. It is differentiated from pulmonary infarction by the presence of pericarditis.

Although the incidence of this complication is small occurring in but three to four per cent of the cases of myocardial infarction, its recognition is extremely important. For one thing anti-coagulation treatment is dangerous since it can lead to death from cardiac tamponade. In addition the treatment can be dramatic and successful with adrenal steroids which act almost in a specific way promptly abolishing fever and pain.

Dressler, Wm. The Post-Myocardial Infarction Syndrome. Arch. Int. Med., 103:28-42, 1959.

L.N.

Mental Disturbances in Medical Students

It is naturally disturbing to society in general and to the medical profession in particular to note the conclusions from studies of medical students indicating a high incidence of emotional disturbances, personality adjustments and neurotic behavior, but are these conditions peculiar to medical students or are they part and parcel of our mode of living?

To begin with, have we compared the present findings with those of other periods and to what extent do they vary?

Even if comparison shows an abnormal increase in mental disturbances, is the increase greater than in other student categories?

If these changes point to a poorer quality of physicians for the future, what if anything can be or is being done about it?

Certainly the medical schools have a responsibility to society to evaluate those whom it accepts for training since once a person has obtained his medical degree his control by society is difficult short of actual convictions of moral turpitude.

It would seem desirable that all candidates for medical degrees be carefully observed during the first two years of medical school training and evaluated from an ethical standpoint before being permitted to continue.

An individual if denied a future in medical practice could continue in allied fields in which he would not be as free to be harmful to society as he would be as a physician.

D. S. O'C.

Errors Of Omission

For years medicine in Connecticut benefitted greatly from the keen and wise diagnostic acumen of Dr. George Blumer whom many of us were most fortunate in knowing. Many physicians in Connecticut were students of his and all of us still benefit from his continuing comments and editorials in this Journal.

Dr. Blumer repeatedly stressed that, in his opinion, most errors in medicine were those of omission rather than commission. A favorite example, which he used over and over again, concerned the appalling infrequency of the rectal examination; one of his favorite comments was, "If you don't put your finger in, you'll surely put your foot in". Although this is as true as ever, many of us have been campaigning for years to change this to "If you don't put a sigmoidoscope in, you'll certainly put your foot in", especially in view of the fact that 75 per cent of polyps and malignancies of the colon are within reach of the sigmoidoscope.

In discussing errors of omission, Dr. Blumer often

stated that many diagnostic errors were due to omission in the sense of not thinking of one or more diseases or problems. Hereditary hemorrhagic telangiectasia is such a condition in that it is infrequently considered in the differential diagnosis of bleeding. Dr. Marvin Fox's scholarly review of this disorder emphasizes the ubiquitous nature and distribution of the lesions of hereditary hemorrhagic telangiectasia, also known as Osler-Weber-Rendu's disease, a characteristic which makes it important for every physician, no matter what his special interest, to be aware of this important cause of bleeding.

Dr. Fox points out that the diagnosis of hereditary hemorrhagic telangiectasia is not difficult in most instances, being based on a positive family history, normal bleeding and coagulation studies, and a tendency to bleed from the lesions which are usually readily visible as sharply demarcated purplish-red spots, elevated or flat, and occur especially frequently on the palmar surfaces of the hands and fingers and quite frequently in the nailbeds, lips, ears, tip and dorsum of the tongue, and Kiesselbach's area on the nasal septum. A characteristic feature is the onset of epistaxis, often quite severe, in childhood, followed often by a remission around puberty, and finally by appearance of the characteristic lesions together with symptoms during the third or fourth decade of life.

S.D.K.

The Social Responsibility of the Medical Profession

In this issue of CONNECTICUT MEDICINE appears an interesting paper by a visitor to our area from overseas. Could it be that our highly developed trend to specialization in medicine is beginning to show our lack of appreciation of the influence of society and the individual and vice versa? For the most damaging indictment against specialization in medicine has been our concern with the part and our ignorance of the whole.

If the broken leg represents only a problem in mechanics to the orthopedist when the social problem is the economic welfare of a wife and children, then specialization is wanting.

If the surgeon considers as his only concern the technique of his operation and not the interpretation of the procedure and its effect upon the future of the patient, he fails in his social responsibility.

In the swift pace of progress of scientific medicine the art of medicine has lost out and our teachers of medicine so frequently divorced from the practice of medicine fail to prepare our future doctors for their social responsibilities.

D. S. O'C.

The Woodruff Restorative Center

The recommendation by Governor Ribicoff that the Woodruff Restorative Center be closed and that the patients served by that Center be handled by the Cedarhurst Sanatorium in Hartford and the Gaylord Farm Sanatorium in Wallingford—a private institution—came as a shock and a surprise to the Center Staff, the medical profession and the public.

While no specific reason was given by the Governor for his recommendation it is presumed that financial savings were expected to result.

The Woodruff Restorative Center was opened only four years ago in the renovated buildings of the old Grace Hospital. It represented a development of the Commission for the Chronically Ill, the Aged and Infirm and its specific function was to take individuals suitable for physical rehabilitation but requiring in-hospital care for part of that work.

This was a new State service and part of a coordinated rehabilitation service of which community rehabilitation centers were to be a continuation. Unfortunately, the Commission for the Chronically Ill as a separate organization was abolished while the institution was being made ready and the work of rehabilitation placed under a combined commission with the Tuberculosis Commission.

The need for the several very large tuberculosis sanatoria which had been built when tuberculosis patients required long in-hospital care, no longer existed due to the revolutionary success of surgical and chemo-therapeutic techniques in the treatment of that disease.

The location of the tuberculosis sanatoria away from centers of population was ideal for that purpose but for the purpose of rehabilitation where contact with friends and relatives has rehabilitation value, they are far from ideal and might be considered inimical to the rehabilitation effort.

There seems to be a feeling on the part of some state officials that because of failure to have all beds at the Woodruff Center filled at all times that this constituted proof that the Center was not needed.

One must appreciate that the Woodruff Center should not be an institution purely for domiciliary care of the disabled but rather a place of temporary residence during the time that the disabled individual could be fitted to appliances to aid his return to a greater degree of self-sufficiency, to train him in the use of his appliances and to rebuild his joint functions and muscles to the point where he could be returned to his home and eventually to self-sufficiency or re-employment.

The administration of the Center and the personnel understanding their function were right in

observing the proper selectivity of those who applied for admission and anyone who had an opportunity of observing the competence and interest of the personnel and the results obtained could only be pleased and proud that this State had such an advanced rehabilitation Center.

It is probably unfortunate that the Woodruff Center has not made a greater effort to acquaint the medical profession with what they were doing because this is probably the only reason that a greater waiting list for admission did not exist.

The Woodruff Center is serving a function not served by any other institution in the State. The personnel are competent, interested, and function in a team-like fashion which is so necessary in rehabilitation work. The buildings serve the purposes of the Center admirably.

The location of the Center in New Haven, with excellent public transportation facilities within the city, easily approachable by private transportation and served by public transportation from all parts of the State is ideal for the purpose for which it is used. Those who understand rehabilitation and who know how well the Woodruff Center is serving its purpose will deplore any success in the plan to close this institution.

D. S. O'C.

A stylized graphic of a person with arms raised, holding a circular object with a cross inside, set against a dark background. Below the graphic, the text reads: "JUST ONE TABLET DAILY", "provides therapeutic levels . . . for 24 hours . . . with low incidence of sensitivity reactions . . .", "WHENEVER SULFAS ARE INDICATED", "KYNEX", "Sulfamethoxypyridazine Lederle", "0.5 Gm. TABLETS/NEW ACETYL PEDIATRIC SUSPENSION", "LEDERLE LABORATORIES, a Division of", "AMERICAN CYANAMID COMPANY, Pearl River, New York", and a small Lederle logo.

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with low incidence of sensitivity reactions . . .

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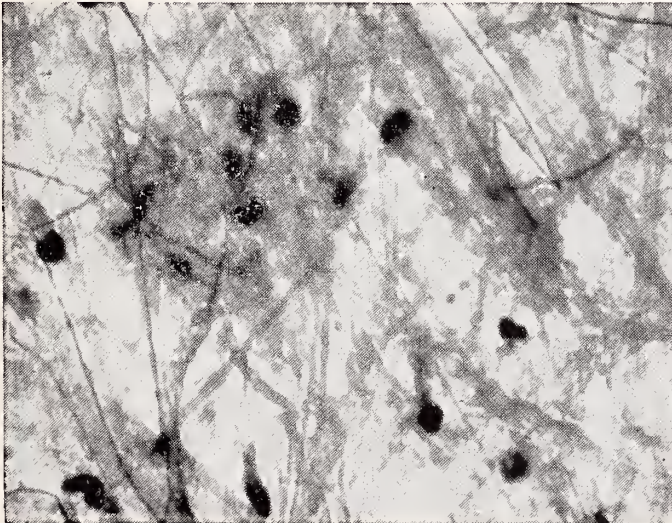
Aristogesic combines the *anti-inflammatory* effects of Aristocort® Triamcinolone with the *analgesic* action of a most potent salicylate. This means that the dosage of each is *substantially lower* than that ordinarily required for each agent alone. With Aristogesic the physician has exceptionally wide latitude in adjusting the dosage to the lowest effective level.

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Dosage: Average initial dosage: 2 capsules 3 or 4 times daily. Maintenance dosage to be adjusted according to response.

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*TRADEMARK



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THE PRESIDENT'S PAGE

AFTER a long experience in the practice of medicine in New Haven—49 years, to be exact—I have seen many changes take place. The advent of prepaid medical care, 10 years or more ago, made a change in the mode of payment to physicians that had only been dreamed of a few years previously. The first that I remember of prepayment to doctors was in the case of several lodges, who reserved a certain amount from lodge dues for payment to the “lodge doctors.” Payment was for house and office visits only and was a meager pittance in comparison to the then existing fees. There were no maternity or surgical benefits. Prepaid medical care now includes more than one half of the population of our State, and allows for free choice of physician, and preserves the doctor-patient relationship with dignity.

Many doctors feel that, in prepaid medical care cases, their fees are substandard, but if one ponders a moment he must realize that he is being paid by some insurance carrier on a virtually cash basis, where in ordinary practice he may have trouble in collecting his fee. Another fact about prepaid care cases is that he is treating as his own private patient many persons who without insurance would be “ward” patients in the hospital.

We are learning more about closed panel systems every day and their effect on the doctor-patient relationship and free choice of physician. The report of the A.M.A. Commission of Medical Care Plans states that “free choice is an important factor in the provision of good medical care.” The same Commission, studying closed panel systems, admits that care of good quality is being made available to patients who cannot select their own physician. The Commission arrives at a rather ambiguous conclusion that good medical care does not necessarily require “free choice” to achieve it, but still states that “free choice” is an important factor in good medical care.

There are many moves on foot in Washington which look to socialization of medicine as their goal. To be sure, the public generally seeks financial security for themselves in their old age when their ability to produce no longer exists. They expect it and feel that the world owes it to them, no matter how imprudent they may have been in their younger days. When illness does come to this older age group, as is sure to happen, they find that they are unable to cope with medical and hospital costs unless these costs are substantially covered by some form of insurance.

We doctors should try our best to keep this coverage among ourselves and in my opinion the best way is by some form of Blue Shield plan which is controlled by our medical societies.

Inflation, which now exists and will probably increase over the years, has made innumerable changes in value of commodities, so that for comparison, an automobile now costs three and one half times what it did in 1941. Doctors' fees certainly have not increased in proportion to the cost of necessities and luxuries. It is evident that we doctors are making a sacrifice in this respect, notwithstanding many opinions to the contrary.

It has been a privilege for me to express some of my views on different topics in this and previous President's Pages.

Walter I. Russell, M.D.

CLINICAL MEDICINE

Dr. Leo Weiner, Associate Professor of Clinical Medicine, N.Y.U. Postgraduate Medical School, guest consultant at a medical conference on January 16, 1959 at The Norwalk Hospital, Norwalk, Connecticut, was presented with two cases of pernicious anemia, and one case of lymphatic leukemia in a child.

In addition to describing the classical criteria for diagnosis, Dr. Weiner had the following comments to make concerning pernicious anemia:

Diagnosis: 1. The neurological signs are usually inversely proportional to the degree of anemia.

2. By use of isotopic B_{12} one can diagnose those cases presenting an atypical picture. The method is based upon the principle that oral B_{12} is not absorbed because of lack of intrinsic factor; therefore isotopic B_{12} will be recovered in the stools (30 to 40 per cent) in pernicious anemia patients but almost absent (less than 10 per cent) in normal subjects.

To rule out Sprue or malabsorption syndrome one then repeats the test and adds intrinsic factor to the oral B_{12} ; patients with malabsorption syndrome will maintain a high fecal recovery level of B_{12} .

Therapy: 1. Liver and B_{12} give a similar response; liver, however, is a painful injection. There is but one known case of B_{12} sensitivity, therefore, the therapy of choice is vitamin B_{12} .

2. If neurological disorders are present, dosage of choice is 1,000 micrograms three times weekly as those disorders can become irreversible and require immediate and intensive therapy.

3. Maintenance after maximal remission is achieved with 50 micrograms per month (one microgram per day is the minimal effective dose). Statistically, if one were to withhold therapy after maximal remission, 20 per cent would relapse in six months, 60 per cent in one year and 20 per cent between one and one half and two years.

4. At N.Y.U., Dr. Weiner's group have maintained an eight to nine year remission (to date) in a group of 50 patients using 250 to 500 micrograms B_{12} per week orally, without the use of Intrinsic Factor. The mass action is apparently sufficient to cause adequate absorption such that remission is maintained.

5. Combined oral therapy with B_{12} and intrinsic factor is not recommended because:

- a. the shelf life of intrinsic factor is not known
- b. Intrinsic factor contains a foreign protein;

there are, therefore, many cases of intrinsic factor antibody formation reported in the literature.

6. The best criterion for effective therapy is the reticulocyte rise:

- a. initial response occurs in three to four days.
- b. maximal rise occurs in six to seven days, then drops off.

Remarking on lymphatic leukemia in young children, Dr. Weiner had the following to say:

Diagnosis: 1. These children often present with joint pains, pleural or pericardial effusion—20 per cent have joint pains as the presenting symptom.

2. Up to 50 per cent have a blood stream infection with the first episode.

Therapy: 1. In many cases initial therapy with antibiotics gives as good a response as other methods because of the infection factor with the first episode.

2. The other choices of therapy are steroids and antimetabolites:

- a. The latter give a hypoplastic marrow before remission begins; in the former, more mature cells are found.
- b. response to steroids occurs in two to three days; that of antimetabolites in two to three weeks. The effect with steroids lasts six to eight weeks, and eight to 10 weeks or more with antimetabolites.

3. On this basis, if a case is very serious he recommends starting with steroids alone or combined with six M P or aminopterin, much as one begins with combined heparin and dicumarol as anticoagulation therapy; the steroids are then dropped and the therapy continued with an antimetabolite.

4. Azaserine has recently been shown to potentiate the toxic effects of six M P and is therefore contraindicated.

Dr. Melvin Orlins

Abstract of conference conducted by Currier McEwen, M.D., Associate Professor of Medicine, N.Y.U.—Bellevue Medical Center, Norwalk Hospital Medical Conference, on December 19, 1958.

GOUT AND ITS MANAGEMENT

Tophi often have a characteristic pinkish-chalky color and may be found overlying the first metatarsophalangeal and other joints, in the lobe of the

ear, and very commonly in the olecranon bursa, where fluid also is often present. By the use of ordinary transillumination of the ear lobe, one can easily distinguish tophi from cartilaginous tissue, as light passes through the latter while tophi remain opaque.

Serum uric acid determinations, unless done in a research laboratory with most careful technique, can be very unreliable. With suitable technique the levels are higher than normal in essentially all gouty patients, even between attacks. Indeed some 20 per cent of symptomless blood relatives of gouty subjects have increased serum uric acid levels. There is no constant relationship between the height of serum uric acid and the symptoms of the disease.

The management of gout depends upon the stage of the disease. In the acute phase, say the first or other early attack, the use of Colchicine serves not only a therapeutic but also a diagnostic purpose, since other forms of joint disease do not respond to it. After this, no interval medication is given until at least two or three attacks have occurred at six month intervals or less. At this time Colchicine 0.5 mg. may be given daily as an interval therapy with the hope of keeping down the number of attacks.

Once the diagnosis of acute gout has been made, acute episodes are better relieved by the use of phenylbutazone. This is at least as effective as Colchicine in relieving acute symptoms and does not have the undesirable gastrointestinal toxic effects so common with colchicine. Phenylbutazone is, of course, potentially dangerous, but not for the short periods required for controlling acute attacks. It should not be used for long periods because of its capacity to induce agranulocytosis. The patient who is subject to acute gouty attacks is wise to carry the medication in his pocket just as a patient with angina pectoris might carry nitroglycerine. Phenylbutazone has a marked effect on electrolytes and is therefore not advised for patients with chronic gout with evidence of renal insufficiency, as anuria may develop.

The use of Benemid in gout is based on four criteria: (1) Tophi, even if the serum uric acid is reported to be normal; (2) frequent or continuous attacks; (3) continuously high blood uric acid (7.5 mg. and up); (4) evidence of renal damage. The latter depends upon the deposition of urates; and the particular type of renal damage is in turn dependent upon where the deposition in the renal unit occurs. Benemid not only decreases the deposition of urates in the tissues, but also has the capacity to cause a decrease in the size of tophi so that surgical excision is now seldom necessary. Benemid is not used during the acute or early phase of the disease because, as mentioned, the deposition of

urates occurs in the later stages. Recently other effective uricosuric agents have become available in addition to Benemid.

As to diet, patients with gout should be advised to avoid foods high in purine content such as sweetbreads, but more drastic restriction of diet is no longer believed to be important.

This article is submitted at the request of the subcommittee on nutrition of the Connecticut State Medical Society.

Dr. Reynaldo D. Alonte

Every Doctor His Own Dietitian

The Do-It-Yourself craze has spread into many fields. It should have reached "Doctors as Dietitians" long ago, but somewhere along the way in his training the average doctor has become so confused in dietetics that he has long ago given up ever understanding food values and calories. Meal planning for the patient is something delegated to the hospital dietitian, if the patient has been sick enough to be hospitalized and if the doctor is forehanded enough to request such help sooner than the hour of discharge. The ambulatory patient, however, may be turned over to the office nurse, who at times does a pretty good job as a dietitian; but more often than not a "diet sheet" is pulled out of a file and handed over with little or no explanation. The sheet may be supplied by a drug house as a "favor" to the doctor. They may even print his name on it, but their own brand of vitamin or food supplement is usually worked into the menu. These diets in addition have the same fault that is found in sheets purchased from a "Diet Service" company (one of which lists 44 specific diets—a diet for every ill!). They are too rigid. They do not take into consideration individual food preferences, racial or religious limitations, or economic factors. Consequently, the chance of this kind of diet being accurately followed is extremely slim. Finally, the doctor may make the vague suggestion to "try a high protein diet" or "go easy on the calories". To most patients, this advice is as confusing as it is worthless.

A dozen years ago a "Do-It-Yourself" diet planning scheme was published in the *Journal of the American Medical Association* by E. K. Caso and F. J. Stare.¹ By a clever system of exchanges, the practicing doctor could figure out his own diets with the minimum of mathematics and memory work. The same general plan has since been adapted by the Committees of the American Diabetes Association, Inc. and the American Dietetic Association and is available for use as a little pamphlet called, "Meal Planning with Exchange Lists"²—complete with pictures and recipes. This was originally designed for meal planning for diabetic

patients and as such is being used as a standard procedure from coast to coast. It is, however, quite adaptable to planning meals for other patients who may need limiting in calories or other constituents of the diet.

Fundamentally, the diets physicians advise for their patients are normal, adequate diets modified in one direction or another to meet a specific need. They are designated by the nature of the modification and not by the name of the disease under treatment. For the diabetic the total carbohydrate content may be limited; for the obese, the total calories; for the cardiac or the nephritic, the sodium content; while for the patient with chronic liver disease there may be an increase in the total protein or carbohydrate figure.

These changes in proportions of the dietary constituents can easily be made by using the Meal Planning pamphlets and, at the beginning, following the "Diabetic Diet Card for Physicians" that can be ordered with them. The patient is given an opportunity to follow his own food likes or his racial tastes by choosing freely from suitable exchange lists in the various food categories (milk, meat, fruit, vegetables, breads, and fats).

For patients who require sodium restriction in their diets, the American Heart Association has prepared booklets³ that are available to the physician without charge. The exchange system of listing foods is used here too. It would seem unnecessary to get all three (mild, moderate and strict-500 mgm. sodium), for using "no added salt" will give the mild restriction, and there is some question if the moderate restriction of sodium is of real value. A supply of the 500 mgm. sodium diet booklets will permit careful, yet quick instruction for the patient who needs salt restriction in an otherwise normal

diet. By changing skim milk for low-sodium milk, a 250 mgm. sodium diet is obtained. Total fuel content can easily be regulated at the same time, as can the amount of fat when desired.

Other changes in the constitution of the diet may modify its mechanical nature. In order that the peptic ulcer or colitis patient may have less local irritation from his food, spices and the fiber content may be restricted. A simple statement "to avoid all spices and the seeds and skins of fruits and vegetables as well as all bran or whole wheat containing food" may be sufficient to convert a diet, as properly planned above, into a restricted fiber or low fiber diet, less accurately called a "smooth", "bland", or "low residue" diet. On the other hand, for the patient without teeth, any suitable diet can be made "mechanically smooth" by grinding.

Thus, with a supply of these two simple meal planning booklets at his elbow and a little practice in thinking of foods in basic groups, any physician in a short office visit can instruct his patient into the mysteries of a normal diet or of any modified diet. His efforts will be rewarded in better understanding and more faithful co-operation from his grateful patient.

REFERENCES

1. E. K. Caso & F. J. Stare: Simplified Method for Calculating Diabetic Diets. J.A.M.A. 133: 169-171; Jan. 18, 1947.
2. Order from: The American Dietetic Association
620 N. Michigan Avenue, Chicago 11, Ill.
or
American Diabetes Association
One East 45th Street, New York 17, N. Y.
(Booklets: 15¢ each or \$6.50 per 100.)
(Diet cards: 5¢ each.)
3. Contact the Heart Association in your area. Specify the level of sodium restriction—strict, 500 mgm. sodium.



ANNUAL COUNTY ASSOCIATION MEETINGS**New Haven, Thursday, March 26**

WAVERLY INN, CHESHIRE

Business meeting: 2:00 P.M.

Social hour and dinner dance to follow

(combined meeting with Woman's Auxiliary)

Speakers: Dr. Clyde Deming and Mrs. Charles Murray Gratz, President of the Woman's Auxiliary**Hartford, Wednesday, April 1**

HOTEL BOND, HARTFORD

Business meeting: 5:00 P.M.

Dinner: 7:15 P.M.

Speaker: Mr. Arthur J. Lumsden*Subject:* "HOW REGIONAL PLANNING AFFECTS THE MEDICAL PROFESSION."**New London, Thursday, April 2**

NORWICH INN

Business meeting: 5:00 P.M.

Dinner: 7:00 P.M.

Speaker: Captain Walter Welham, Medical Corps, U.S. Navy*Subject:* "MEDICAL ASPECTS OF NUCLEAR SUB SERVICE ACHIEVEMENTS."**Middlesex, Thursday, April 9**

COMMODORE MACDONOUGH INN, MIDDLETOWN

Business meeting: 4:30 P.M.

Dinner: 6:30 P.M.

Speaker: Mr. Benjamin Seigal, Oakdale Theatre*Subject:* "PROFESSIONAL THEATRE TODAY."**Fairfield, Tuesday, April 14**

STRATFIELD HOTEL, BRIDGEPORT

Business meeting: 4:00 P.M.

Dinner: 7:00 P.M.

Speaker: Mr. Edmund G. Love, author and war historian**Litchfield, Tuesday, April 14**

CONLEY INN, TORRINGTON

Business meeting: 7:30 P.M.

Dinner: 6:30 P.M.

There will be no speaker.

Windham, Thursday April 16

BEN GROSVENOR INN, POMFRET CENTER

Dinner: 7:00 P.M.

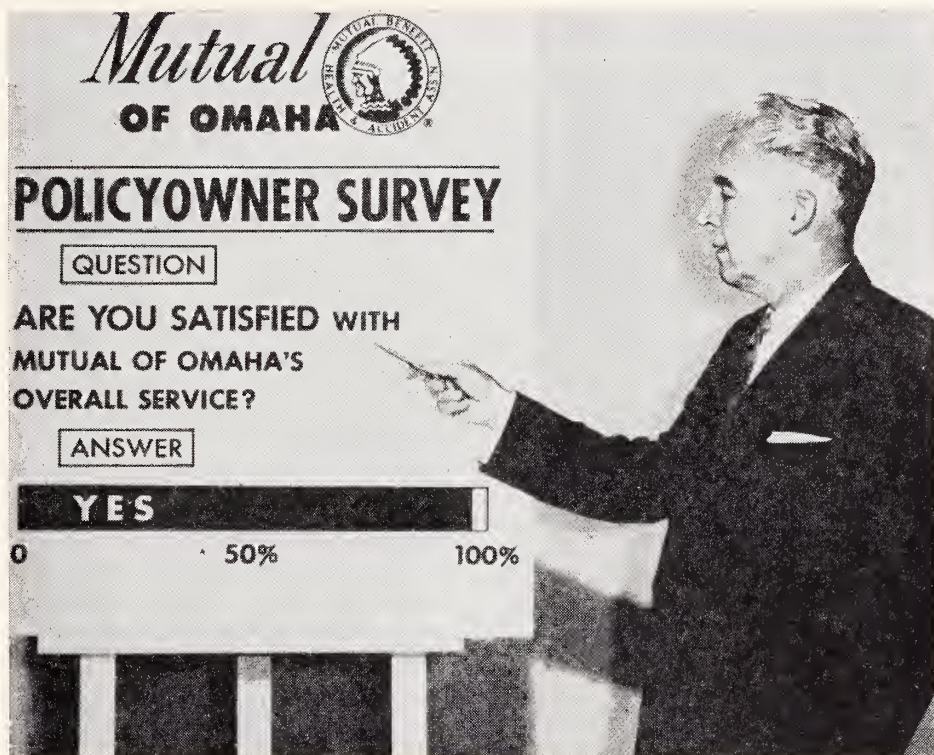
Speaker and subject to be announced.

Tolland, Tuesday, April 21

OLD HOMESTEAD INN, SOMERS

Dinner: 6:30 P.M.

Speaker: Mr. Norman F. Dacey*Subject:* "ESTATE PLANNING FOR THE PHYSICIAN."



V. J. SKUTT, President, Mutual of Omaha

SATISFIED POLICYOWNERS HAVE MADE MUTUAL OF OMAHA THE LEADER

The final test of leadership rests with our policyowners. In a survey of its policyowners, Mutual of Omaha asked the question, "Are you satisfied with Mutual of Omaha's overall services?"

Of those responding an overwhelming 96.49% answered YES.

Last year saw the payment of the BILLIONTH DOLLAR in cash benefits to policyowners and their beneficiaries . . . more than 75% of which has been paid out in the last 10 years. This made Mutual of Omaha the first company in history to pay out \$1,000,000,000 in health and accident benefits during its first fifty years.

D. A. Long and Associates, representatives for Mutual of Omaha in Connecticut, also had a record-breaking year in services rendered to policyowners. More than one and one quarter million dollars were received in benefits by Connecticut policyowners and their beneficiaries.

We invite you to visit any one of our many offices throughout the state and tour our facilities.

In 1959, as it has been in the past, our byword and objective remains the same . . . SERVICE.

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70 ELM STREET
NEW HAVEN, CONNECTICUT

Mutual
of
Omaha

FROM THE SECRETARY'S OFFICE

WILLIAM R. RICHARDS, M.D., *Executive Secretary*

James G. Burch
Director of Public Relations

160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

Josephine P. Lindquist
Assistant to Executive Secretary

CALL

ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1959 Annual Meeting of the House of Delegates will be held in the auditorium of the Hamden High School, 2040 Dixwell Avenue, Hamden, commencing at 10:00 o'clock in the morning of Tuesday, April 28.

Following luncheon, the House will reconvene for the completion of business.

Walter I. Russell, President

William R. Richards, Secretary

INTRODUCTION OF RESOLUTIONS

Article VII, Section 4, of the By-Laws of the Society provides:

Par. 1. All resolutions to be introduced before the House of Delegates at an annual, semi-annual, or special meeting, except resolutions and recommendations from the Council and resolutions and recommendations that may be contained in committee reports, shall be delivered to the Executive Secretary in time for publication in the official agenda for the meeting at which action is to be taken.

Par. 2. Resolutions and recommendations to be introduced before the House of Delegates at an annual, semi-annual, or special meeting by the Council and recommendations that may be contained in reports of standing or special committees of the Society shall be published in the official agenda for the meeting at which action is to be taken. The official agenda shall be distributed to the members of the House of Delegates at the earliest possible date preceding the meeting.

Par. 3. Resolutions and recommendations which do not meet the requirements of paragraphs 1 and 2 of Section 4 of this article may be accepted for action by a session of the House of Delegates by a majority vote of the delegates present. Such resolution and recommendations shall be referred at once by the presiding officer to reference committees appointed by him from the membership of the House. These reference committees shall consider the resolutions and recommendations referred to them and shall report, with recommendations, to the House before adjournment of the session.

On February 12, 1959, the Council voted to accept, with commendation, a report submitted to the Council by Dr. George A. Buckhout, Chairman of the Committee on Medical Care of Veterans.

Because of its excellence and because of its timely significance to all physicians, the report is herewith presented in its entirety.

Subject: The attempt to socialize Medicine by Government Agencies.

This Committee has been aware for a long time of the changing attitude of the Veterans Administration about care of veterans. Soon after World War II, all American physicians were called upon to carry out "Home Town Care" on veterans with service connected disabilities. In a relatively short time, new V.A. Hospitals and Clinics were set up, and the Home Town Care program decreased so that now it is nearing the zero mark in Connecticut.

At the same time we have noted with increasing alarm the terrific number of non-service connected disabilities cared for in V.A. Hospitals. We have been made aware of the pressure by various organizations to further increase and centralize care of the veterans.

We are told that "Medicare" (which is not in the realm of this Committee) is proceeding very much more rapidly in the same direction.

We read and discussed at length the very excellent report given to the Council, concerning the Conference on Federated Medical Services in Minneapolis by Dr. Harold M. Clarke. I would like to repeat here the second paragraph of that report.

"The Conference opened with a review of the A.M.A. policy on veterans' medical care presented by Russell B. Roth, who is Chairman of the Council on Federal Medical Services. The following A.M.A. policy was reiterated briefly: Namely that 1) The Federal Government should limit itself to the care of veterans with Service-connected disabilities. 2) That whenever possible such care should be rendered in the veteran's own community, either as an in-patient in a hospital or as an out-patient in the office of a doctor of his own choice. 3) That the A.M.A. is opposed to the research and educational programs being carried out in Veterans' Administration Hospitals."

None of this is new. Nearly every member of the Committee and many others in the State Organization have heard the same words in National and Regional Meetings. And yet the move goes on. When will the V.A. start to include veterans' families for all medical care? When will other government groups, (say those under civil service) set up a cry for complete coverage?

In all branches of Science; aircraft development, marine development, electronic development and personal protective equipment the Federal government gives research grants to established civil businesses and agencies. The education and research programs of the V.A. is a most obnoxious deviation from this policy. They are doing nothing that could not equally as well be done by our private and state hospitals. Furthermore, their program is creating undue competition, which in some instances handicap the services of our private and state medical institutions.

Our Committee deemed it of such importance that the Chairman was ordered to communicate directly with the Council and recommend

- 1) That Connecticut medicine oppose this with all the means at its disposal, and,
- 2) Join with other states to make our voice heard in the National Assembly, and,

- 3) Work with all our power to reverse the present trend by our own government agencies to Socialize Medicine.

GEORGE A. BUCKHOUT, M.D., *Chairman*

"Care of the Aging"

The following communication from Mr. Robert Parnall, General Manager of Connecticut Blue Cross, was received in reply to a letter from the Secretary asking what Blue Cross is currently planning to do in the field of "Care of the Aging." It appears to the Secretary to be a very forthright and constructive statement.

"I think the Resolution of the American Medical Association is constructive and I will be interested in seeing what results from it.

"It is not so much a matter of what we are planning to do as it is what we have done and are doing. Connecticut Blue Cross has had concern for the aged population for the past 22 years of our existence. As a result, approximately 100,000 Connecticut persons over age 65, or more than half of the Connecticut population over such age, are currently paying dues to Connecticut Blue Cross and receiving its benefits.

"Such aged membership requires a substantial subsidy from other members of Blue Cross which represent one-half of the entire Connecticut population. Our objective is to enroll substantially the other half of the Connecticut population so that, in addition to receiving direct benefits, it can also contribute its share toward helping to subsidize the remaining half of the Connecticut population over age 65 not yet enrolled. As I see it, this is the only practical and fair way to enable more elderly people to have the benefits of Blue Cross."

Meetings Held in April

- 1 Advisory Committee on Nutrition to the Committee on Public Health
- 8 Joint Study Committee on Staphylococcal Infections
Sub-committee on Toxemia of the Committee on Maternal Mortality and Morbidity
Joint Committee—Committee on Professional Practice of Connecticut Hospital Association and Committee on Hospitals of Connecticut State Medical Society.
- 9 Liaison Committee with Connecticut Hospital Association
- 15 Committee on Maternal Mortality and Morbidity
- 16 Committee on Public Relations
- 22 Committee on Accident Prevention

(Continued on Page 271)



why do I have CMS?

I've got five children. To provide my family with surgical-medical coverage could be quite an undertaking. As a member of CMS, through my place of employment, I can provide coverage for my whole family. And my cost is low, less than 2½ cents a day for each member of my family.

It's good to have CMS standing by to help pay doctor bills.



Connecticut Medical Service, Inc.

The Blue Shield Plan for Connecticut

GENERAL OFFICES • NEW HAVEN

COUNCIL MEETING

Wednesday, March 18—3:30 P.M.

A regular monthly meeting of the Council was called to order by the Executive Secretary, Dr. Richards, in the absence of the Chairman, Dr. Feeney, who was unable to attend. Present in addition to the Executive Secretary were Doctors Russell, Weise, Polito, O'Connor, Carter, Gallivan, Cullen, Scully, Davis, Gens, Clarke, Kennedy, Buckley, Blodinger, Eddy, Seigle, Grendon, Gardner, Rentsch, and Gilman. Absent were Doctors Feeney, Archambault, Schiavetti, Ottenheimer, Starr and Hughes.

EXEMPTION FROM PAYMENT OF DUES. It was VOTED to exempt the following members from payment of dues: Fernald C. Fitts, New Haven County, 1958 dues—physical disability. Jerome L. Gauthier, Windham County, 1958-1959 dues—Military Service.

PROGRAM FOR ANNUAL DINNER. A request was received from Dr. Charles C. Verstandig, Chairman of the Local Committee on Arrangements, as to the type of after-dinner program desired for the annual dinner. It was suggested that Dr. Howard C. Taylor be invited to present his experiences at the South Pole, and that if Dr. Taylor was unavailable, that the committee obtain some type of musical or other entertainment.

COMMITTEE RESIGNATION. A letter was presented from Dr. Bernard F. Mann, Jr., submitting his resignation from the Committee on Maternal Mortality and Morbidity and the Committee on Hospitals, his reason being that he would like to devote more time to the new Committee on Health Careers, of which he has been appointed Chairman. It was VOTED to accept Dr. Mann's resignation with regret.

NATIONAL HEALTH FORUM, CHICAGO. It was VOTED to authorize Dr. John F. Kilgus, Chairman of the Committee on Industrial Health, to attend the National Health Forum in Chicago on March 17-19, 1959, as a representative of the Society, and to reimburse him for his expenses incurred in attending this meeting.

ENDORSEMENT OF DR. RICHARDS. The following letter was received by the Council: "At the meeting of the Board of Governors of the New Haven County Medical Association held on February 26, 1959, it was voted that we heartily and unanimously approve the selection of Dr. William R. Richards to the full time post."

It was VOTED to thank New Haven County Medical Association for their endorsement.

COMMITTEE TO STUDY DESIRABILITY OF EMPLOYMENT OF FULL-TIME EXECUTIVE SECRETARY. Dr. Blodinger reported for the Committee and discussed

all of the aspects of the contract which had been developed with an attorney to obtain the services of Dr. Richards; copies of the contract had been distributed to all members of the Council. On the recommendation of the attorney, Dr. Blodinger moved to delete in the original committee report submitted to the Council on February 12, 1959, the following: Par. 2, "As presently written in Article VI, Section II, Paragraph 4: The Executive Secretary is authorized 'to employ such assistance as may be approved by the Council.' . . . 'through this provision of the by-laws.' . . ." It was VOTED to approve Dr. Blodinger's motion. After full discussion it was VOTED unanimously that the Council approve this contract for transmittal to the House of Delegates with the recommendation that it be approved by the House. It was further VOTED that the Council thank the committee for its hard labors in evolving this contract. The complete text of the contract to be transmitted to the House of Delegates follows:

This agreement made by and between the Connecticut State Medical Society, a Connecticut Corporation with its principal place of business in New Haven, Connecticut, herein referred to as the Society; and William R. Richards, M.D. of Hamden, Connecticut, herein referred to as the General Manager, wherein it is mutually agreed that:

1. The Society will employ the General Manager, and he will act as general manager of the society for the initial term of five years from the effective date.
2. This agreement shall be subject to the approval of the House of Delegates of the Connecticut State Medical Society at its meeting on April 28, 1959; and shall be effective upon execution by both parties hereto, but not later than June 1, 1959.
3. After the expiration of the initial term, this agreement may be renewed for additional terms of not less than two and not more than five years each provided that the General Manager shall give at least six months' written notice to the Council of the Society of his intention to renew and of the duration of such renewed term. No renewal of this contract shall be effective unless approved in writing by the Council of the Society within four months after its receipt of written notice from the General Manager of his intention to renew. Provided further, that the total term of this agreement, including renewals, shall not exceed fifteen years from the effective date of this agreement.
4. During the term of this agreement, the General Manager shall use his best endeavors to

promote the interest and welfare of the Society. He shall not engage in private medical practice; nor shall he engage in any activity which interferences with his full performance of the terms of this contract.

5. The General Manager shall exercise and carry out all powers and duties, and shall observe all such directions and restrictions, as the Council of the Society may from time to time impose upon him, but in default thereof the General Manager shall manage and supervise the ordinary affairs and business of the Society, and do any and all acts and things necessary or conducive to such management.
6. The duties of the General Manager shall include but not thereby be limited to the following:
 - a) To manage the Society office, grounds, equipment and other property.
 - b) To supervise the employees of the Society office.
 - c) To maintain membership and biographical records.
 - d) To collect Society dues except from the members of any County Association which collects the Society dues.
 - e) To collect American Medical Association dues from all members of the Society who are members of the American Medical Association.
 - f) To make necessary business arrangements including those for commercial exhibits.
 - g) To record attendance and proceedings, and maintain records of all meetings of the House of Delegates, the Clinical Congress, the Council, and committees of the Society.
 - h) To maintain the Society's financial records in cooperation with the Treasurer, the Society's bankers and auditors.
 - i) To pay authorized expenditures from funds allocated by the Treasurer.
 - j) To conduct the official correspondence of the Society including notifying members of meetings, officers of their election and committees of their appointment and duties.
 - k) To provide guidance services to physicians seeking professional placement in Connecticut.
 - l) To maintain working contact and cooperation with the component county associations of the Society and with the Woman's Auxiliary.
 - m) To maintain active liaison with State government agencies.
 - n) To maintain active liaison with the head-

quarters of the American Medical Association.

- o) To maintain active liaison with voluntary health agencies serving Connecticut.
- p) To implement and coordinate the activities of the Society with respect to State legislative programs.
- q) To implement and coordinate the Society's public relations and publicity programs.
- r) To aid and assist the officers of the Society in the performance of their powers and duties.
7. The General Manager shall receive by way of remuneration for his services an annual salary of not less than \$20,000.00, payable in twelve equal installments on or about the first day of each month in each year during the term of this agreement.
8. The Society shall also, in consideration of the services of the General Manager, pay all sums necessary under its employees' pension plan.
9. The Society will reimburse the General Manager for all reasonable and necessary expenses incurred by him on behalf of the Society upon presentation to the Council of a verified, itemized statement of the date, purpose, and amount of each expenditure. Provided, however, that no item in excess of \$150.00 shall be paid unless approved by the Council in advance.
10. The General Manager shall provide a bond with sufficient surety in a reasonable amount to be determined by the Council of the Society, conditioned to the faithful performance of his duties as General Manager. The premiums on such bond shall be paid by the Society.
11. During the term of this agreement the General Manager shall not receive any financial compensation, or honorarium from the Society except as set forth above.
12. If the General Manager shall at any time be incapacitated by illness or otherwise from performing his duties for three consecutive months; or if he shall be or become in any way unfit to act as General Manager, the Society may in its discretion terminate this agreement, provided that it give three months' advance written notice to the General Manager.

Approved by the House of Delegates, this day of 1959.

by President of the Society duly authorized
In Witness whereof, I have hereunto set my hand and seal, this day of 1959.

William R. Richards, M.D.

In Witness whereof, the Society has set its hand and seal, this day of 1959.

by Chairman of the Council, duly authorized

RESOLUTION FROM STAMFORD MEDICAL SOCIETY. The following resolution was received from the Stamford Medical Society: "The Stamford Medical Society at its monthly meeting on December 16, 1958 resolved unanimously to convey to the Connecticut State Medical Society their displeasure over compulsory donations to the American Medical Education Foundation, even though it be on a supposedly voluntary basis." It was VOTED that no action be taken on this matter.

RECOMMENDATIONS FROM COMMITTEE ON HOSPITALS. (a) The following recommendations were received from the Committee on Hospitals re relationship of staff members to hospital management: "1/14/59—Voted, that it is the opinion of the Committee on Hospitals of the Connecticut State Medical Society that according to Article X, Section 3, Par. 4 of the Society's By-laws such matters are germane to the duties of the Committee on Hospitals and that, furthermore, the members of the Committee request the Council to refer such matters to the Committee in the future."

"3/4/59—Voted, that inasmuch as the Committee on Hospitals of the Connecticut State Medical Society is in existence to establish liaison with the Connecticut Hospital Association, it is the feeling of the Committee that another liaison committee as proposed at the Council meeting of January 7, 1959 would reduplicate channels of liaison and that one of the two committees is unnecessary and could well be deleted."

During the discussion of these two recommendations, it was pointed out that the Liaison Committee with the Connecticut Hospital Association appointed by the Council on January 7, 1959 was an ad hoc committee to study channels for negotiations and that it would be dissolved after it makes its recommendations to the Council. It was VOTED that the Liaison Committee confer with the Hospital Committee to discuss this problem.

(b) Dr. Blodinger presented a progress report of the Liaison Committee with the Connecticut Hospital Association which did not include any recommendations, and indicated that future meetings were planned.

RESOLUTION FROM MARYLAND RE ACCREDITATION OF HOSPITALS. The following resolution was received which contained the following: "RESOLVED, that:

1. The Medical and Chirurgical Faculty of the State of Maryland based on its collective experience and study, hereby makes a finding of fact that the presently existing methods of approving and disapproving hospitals for accreditation adversely effect the potentialities and effectiveness of such institutions generally and the resident, intern and

visiting physicians associated with such hospitals specifically;

2. The Commission on Accreditation of Hospitals and the Council on Medical Education and Hospitals review and reconsider their objectives and their procedures and evaluation methods in achieving such objectives;

3. The opinions and findings of local medical societies be given more weight in appraising hospital facilities and services for accreditation; and

BE IT FURTHER RESOLVED, that the Secretary of the Medical and Chirurgical Faculty be instructed to transmit copies of this resolution to all Component Societies of the American Medical Association for their information and appropriate action. Such appropriate action, it is hoped, will include the forwarding of similar resolutions in democratic action to the Joint Commission on Accreditation of Hospitals and to the Council on Medical Education and Hospitals of the A.M.A.; and that this resolution be placed in the hands of the Medical and Chirurgical Faculty's Liaison Committee on Accreditation of Hospitals for implementation."

After some discussion and upon recommendation of the Committee on Hospitals which submitted a report, the Council VOTED to adopt the recommendation of the Committee on Hospitals that the Council take no action on the Maryland resolution.

THOMAS PATRICK MURDOCK SCHOLARSHIP AND LOAN FUND. The following excerpt from a letter received from the Meriden Medical Society was read:

"At the same meeting the Thomas P. Murdock Scholarship and Loan Fund was discussed and it was the consensus of opinion that the time had passed when the formation of such a scholarship fund could be successfully undertaken. We therefore feel that no action is indicated at the present time."

It was VOTED that the Council take steps to legally dissolve this fund and return contributions to donors. A total of \$160.25 is on deposit with the Meriden Trust and Safe Deposit Company, \$100.00 contribution from Society to initiate fund and \$60.25, two contributions plus interest.

O. C. SMITH FUND. Dr. Richards outlined the purposes of this \$1,000.00 fund, which was received from Oliver C. Smith, Hartford in 1915, namely that the Society invest this \$1,000.00 in a separate fund, and the income thereof be used to pay the dues of any deserving members of the Society who may be unable to pay dues themselves. Discussion was entered into as to whether this fund should be utilized for some worthy case and not for routine remission of dues because if used routinely, the income would soon be depleted. Finally, it was VOTED that the accumulated interest of this fund

be utilized as far as it will go for remission of dues and to follow the same procedure in the future.

REPORT OF NOMINATING COMMITTEE. Dr. Richards presented the report of the Nominating Committee for Dr. Feeney, who was absent. It was VOTED that the Casualty Planning Committee be removed from the roster of committees, which is in anticipation of a recommendation to be presented by Dr. Reginald C. Edson, Chairman of the Committee, in his report to the House of Delegates. It was VOTED to approve the report of the Nominating Committee and transmit it to the House of Delegates. It was further VOTED to thank the Nominating Committee for its hard labor.

REVIEW OF COMMITTEE REPORTS TO BE PRESENTED TO HOUSE OF DELEGATES. An abstract of all committee reports was distributed to members of the Council. In the processing of the reports, it was noted that in the report of the Managing Editor of the Journal, mention was made of adding a new employee in the Journal office without Council approval. Dr. O'Connor explained that this was done on a 3-month trial basis and that her salary had been paid from funds allotted to the Managing Editor as salary. He further stated that he felt that this was necessary to provide for continuity of operation of the Journal, that there was only one employee working on the Journal and if for any reason she could not be on the job, this would disrupt publication; also that the work load was such as to warrant two employees in the Journal office. During the discussion, it was pointed out that all Society employees must be hired by the Executive Secretary with the approval of the Council and it was VOTED that the Council authorize the hiring of this necessary help by the Executive Secretary for service in the office of the Journal. It was further VOTED to reimburse Dr. O'Connor for any personal expense he incurred in the payment of the new employee's salary from the date of employment to the present time.

Dr. Edson suggested in a supplemental letter accompanying his report of the Casualty Planning Committee that since the Society is being asked to appoint representatives to the State Civil Defense Council, it may be that the need for a Casualty Planning Committee will cease. It was VOTED that Dr. Edson give a supplemental report to the House of Delegates recommending that this committee be dissolved.

It was VOTED that the Council commend the Executive Secretary's office for the excellent preparation and presentation of these reports.

ASSOCIATE MEMBER. On recommendation of the Committee on Public Health and an application having been received from Earle K. Borman, B.S., M.S., Section Chief, Laboratory Services Section, Connecticut State Department of Health, it was

VOTED that the Council recommend to the House of Delegates that Earle K. Borman be made an Associate Member.

REPORT OF MEETING OF COUNCIL SUBCOMMITTEE WITH DELEGATES TO COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES. Dr. Scully, who had met with Dr. Stringfield and Dr. Ogden, Delegates to the Council of New England State Medical Societies, reported a number of matters which had been discussed with regard to activities of the New England Council in which the Connecticut State Medical Society might be interested or concerned. It was VOTED to accept Dr. Scully's report for information and to thank him for his report.

RESOLUTION RE FREE CHOICE OF PHYSICIAN; RESOLUTION RE CLOSED PANEL SYSTEMS; RESOLUTION RE CARE OF THE AGING. It was VOTED that the Council recommend such resolutions to the House of Delegates for action at its next regular meeting. Discussion was entered into and the following resolutions were approved by the Council for transmission to the House of Delegates:

FREE CHOICE

"WHEREAS: The House of Delegates of the American Medical Association has requested an expression of opinion from constituent and component medical societies concerning the present-day concept of free choice of physician as a 'fundamental principle, incontrovertible, unalterable and essential to good medical care, without qualification'; and

"WHEREAS: Freedom of choice in every field of activity is a basic manifestation of the American way of life; and

"WHEREAS: The physicians of Connecticut have carefully reconsidered this traditional concept of free choice in terms of optimum patient-physician relationship and the maintenance of a high quality of medical care; therefore

"BE IT RESOLVED: That the Connecticut State Medical Society believes that a reasonable degree of freedom of choice from among all physicians in the community who are willing, qualified and available to perform the essential services is a fundamental principle and essential to good medical care."

CLOSED PANELS

"WHEREAS: The House of Delegates of the American Medical Association has requested from each constituent and component medical society an answer to the question: "What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?"; and

"WHEREAS: The Connecticut State Medical Society has this day reaffirmed its belief in the concept of free choice of physician as a fundamental principle, and essential to good medical care; and

"WHEREAS: The Connecticut State Medical Society considers that systems of medical care which deny a reasonable degree of freedom of choice of physician cannot serve the best health interests of the public; and

"WHEREAS: The AMA Commission on Medical Care Plans has reported that actions taken by medical societies to deter physician participation in such plans elsewhere have generally been ruled illegal; therefore

"BE IT RESOLVED: That the Connecticut State Medical Society is opposed to so-called 'closed panel systems' and encourages its members to support systems of medical care which assure to the patient a reasonable degree of freedom of choice from among all those physicians in the community who are willing, qualified and available to perform the essential medical services."

CARE OF AGING

"WHEREAS: The House of Delegates of the American Medical Association has recommended that all constituent and component medical societies as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group of people over 65 with 'modest resources' and 'low family income'; and

"WHEREAS: The House of Delegates of the AMA has further recommended that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such . . . plans at a reduced premium rate; and

"WHEREAS: Since 1948, most Connecticut physicians have accepted a level of compensation for their services which has permitted Connecticut Medical Service, Inc. (Blue Shield) to develop low-premium prepayment plans for all citizens of the state with 'modest resources' and 'low family income'; and

"WHEREAS: It appears that existing Connecticut Medical Service contracts can be readily modified to meet the special needs of the aging without altering the level of compensation presently in effect; therefore

"BE IT RESOLVED: That the Connecticut State Medical Society pledges its continued support to the development of effective health insurance and prepayment programs for all citizens, including the group over 65."

It was further VOTED that the Council request the eight councilors from the eight component county associations to present these resolutions to their county associations for action at their forthcoming annual meetings.

CONNECTICUT MEDICAL SERVICE. In the absence of Dr. Feeney, Dr. Richards reported that there had

been no meetings of the liaison committees since the last Council meeting. He reported that the four nominees of the Council for CMS directorships had been elected on February 17, 1959 and that with one exception, all members of the Medical Advisory Board to be jointly nominated by the sub-committees of CMS and the Council, were elected. These members had been endorsed by the Council at its last meeting.

The principal item of discussion which relates to CMS was transmitted to the Council by Dr. Blodinger. He informed the Council that an advertising campaign regarding a CMS contract to serve the needs of people over 65 would be launched by CMS in the very near future, probably by March 20, 1959. Sample copies of an existing "Special Individual Contract" which had been amended to permit its sale to people of any age throughout the state, had been submitted to the Council for inspection and it became apparent to the members of the Council, after prolonged discussion, that this document did not constitute a new contract or a major change in an existing contract. It was therefore determined that no action by the Council, the component county associations, or the House of Delegates was required. However, the feeling of the Council was that if this advertising campaign and sale of this contract were to be implemented within the next two weeks, there might very well be a misunderstanding and misinterpretation by the members of the Society as to its nature and significance. Dr. Blodinger assured the Council that he would make every effort to get the CMS Board of Directors to delay its public announcement on this contract for a few days in order to inform the members of the Society about the plan.

It was then VOTED that all of the facilities of the state office be utilized to get out to every member of the State Society complete information about the proposed amendment of the Special Individual Contract emphasizing that the Special Individual Contract provides exactly the same benefits as the Preferred Contract, with no change in income levels or schedules of payment and that the only change is extending it to older age groups, in consonance with the American Medical Association recommendation relative to medical care of the aging and adjusting the premiums to take care of this older age group.

It was further VOTED that the councilors make every attempt to disseminate this information to their county associations as rapidly as possible and that they encourage thorough discussion at their annual meetings.

LETTER FROM COMMITTEE ON PUBLIC RELATIONS. A letter was presented from the Chairman of the Committee on Public Relations which included requests that (1) in cooperation with the Society's

Committee on State Legislation, a Coordinator be obtained for legislative matters and that (2) additional staff personnel be added to permit the proper functioning of the Committee on Public Relations and other Committees of the Society. It was agreed that the Chairman of the Committee on Public Relations should be informed that the Council is fully aware of the fact that on a part-time basis, the Executive Secretary cannot be expected to operate as efficiently as might be desired and that the Council is presently taking action to increase the efficiency of the Secretary's office.

STATE OPERATIONAL SURVIVAL PLAN. A letter from Dr. Osborn was presented requesting appointment of representatives of the Society to the State Operational Survival Plan. It was VOTED that the Chairman of the Council, the Executive Secretary and the Councilor-at-Large make these appointments.

MISCELLANEOUS CORRESPONDENCE. (A) It was VOTED to approve a request received from Dr. Donnelly, Chairman of the Committee on Aging, requesting authorization for that committee to act as representatives of the Society to meet with the State Commission on Services for the Aging (Governor's Committee) for the purpose of aiding in the preparations for the White House Conference on Aging, planned for January, 1961.

(B) It was VOTED to support the issuance of a special stamp issue commemorating the 150th anniversary of the first successful oophorectomy which was performed by Dr. Ephraim McDowell and to communicate this support to the "Citizens Stamp Advisory Committee."

(C) The Executive Secretary reported that in reviewing the minutes of the Advisory Committee on Control of Staphylococcal and Other Hospital-Acquired Infections, it appeared that the committee was actively functioning as a committee rather than as a joint investigating body for the purpose of developing a Connecticut Plan for control of these infections. The Council received this report as information.

(D) A letter had been received from the National Blue Shield Medical Care Plans organization informing the Council that at the 1958 Annual Conference of Blue Shield Plans, a resolution had been passed in which the need was stressed for close liaison between state or other medical societies and Blue Shield plans of the particular area involved. On the basis of this resolution Blue Shield Medical Care Plans extended an invitation to "principal executive officers of medical societies." It was VOTED to accept the invitation for the President, Executive Secretary and the Chairman of the Council to attend the 1959 national meeting of Blue Shield Medical Care Plans, to be held in Miami Beach, Florida from April 12th to 16th. However,

since the President, Dr. Russell, will attend this meeting as a Director of Connecticut Medical Service, it was further VOTED to authorize the President-Elect to attend in place of the President. The Secretary was requested to inform Mr. Castellucci of the officers who were authorized to represent the Society and to inquire of Mr. Castellucci as to whether the invitation included expenses.

(E) It was VOTED to inform Mr. G. S. Zuccala, operator of a biological laboratory in Hartford, that the Council cannot appoint a physician to assist him or collaborate with him in his work.

ELECTION OF STUDENT MEMBERS. Five student members were elected to membership.

MISCELLANEOUS BUSINESS. It was VOTED to approve a motion introduced by Dr. Seigle, Councilor from Hartford County, that the Council, through the Executive Secretary, convey to Senator Thomas Dodd its approval of his bill favoring Social Security for physicians.

DATE FOR NEXT MEETING. It was VOTED to hold the next meeting on Wednesday, April 22, 1959. The meeting adjourned at 8:30 P.M.

Midget Device Records Heart Rate During Full Day of Normal Activity

A three-ounce device that can count and keep a record of the human heartbeat and be worn during a full day of normal activity has been developed here by a team of medical investigators and telephone engineers.

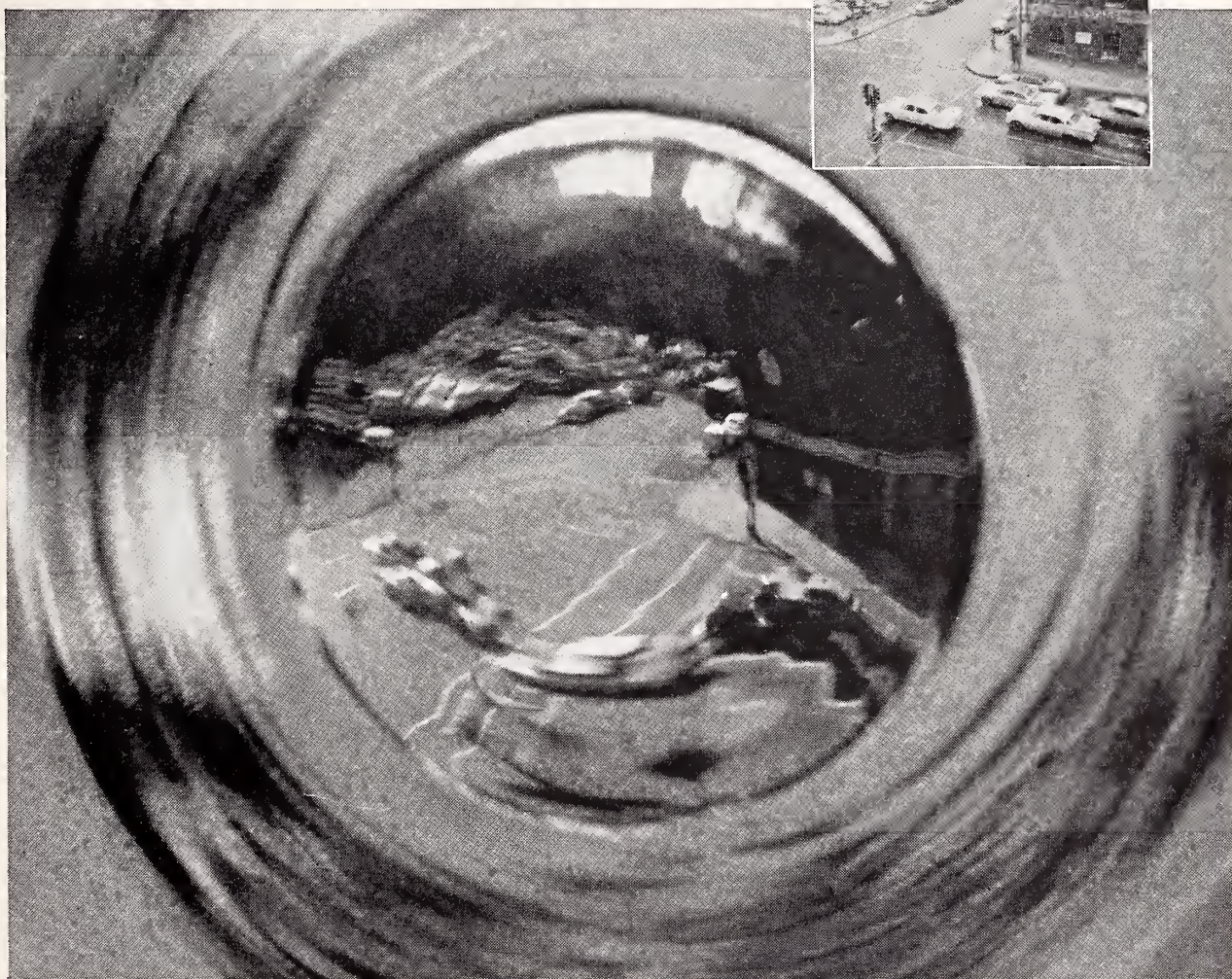
Thirty-five engineers of the Illinois Bell Telephone Co. have volunteered their spare time to help the medical research staff at the University of Chicago develop machines needed in clinical research, teaching, and therapy.

The cumulative heartbeat recorder consists of two dimes used as electrodes connected by two wire threads to two plastic boxes containing a relay magnet, five transistors, two mercury batteries, and a wristwatch.

The electrodes, taped to the patient's chest, pick up the millivolt of electricity generated in each heartbeat. At the first box the beat is amplified to a full volt by the transistors powered by the miniature batteries. The electricity then passes to the second plastic box, coils through the magnet, and creates enough tension to move a lever controlling the escapement mechanism of the watch.

Thus each heartbeat becomes a tick of the watch. Since the escapement is constructed to tick five times per second, one second on the face of the watch registers five heartbeats.

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*Pratt, R. T. C., and McKenzie, W.: Anxiety States Following Vestibular Disorders, Lancet 2:347 (Aug. 16) 1958.

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Research in the Service of Medicine

SEARLE

Special Article

Medical Education, The Physician And Society

LOUIS H. NAHUM, M.D.

New Haven

THERE is now ample evidence that a disproportionate number of medical students suffer from emotional disturbances. Strecker² found 46 per cent of senior medical students at the University of Pennsylvania had neurotic handicaps of a major character. Similar results were found at Cornell, at Chicago³ and at Cincinnati by separate investigators. Wyler⁴ found in third year medical students a high incidence of personality maladjustments and in some instances rather severe neurotic behavior of a type which could hinder productivity as a physician.

Is this the result of a poor selection by admissions committees of individuals with personality maladjustments as compared with selection in other professional schools? Or does the medical school curriculum itself encourage this development? If the latter is true, then do these personality maladjustments influence further the choice of a specialty within medicine which an individual makes. Do they also influence his ultimate success or failure as a medical student and physician?

Tentative answers to these questions can be found in a report on a study made by Professor Eron¹ of a Yale Medical School freshman and senior class. He studied three variables in these two classes, anxiety, cynicism and humanitarianism. Cynicism is defined as "a contemptuous disbelief in man's sincerity of motives or rectitude of conduct characterized by conviction that human conduct is suggested or directed by self-interest or self-indulgence". Humanitarianism—"a regard for the interests of mankind, benevolence, philanthropy". Prof. Eron found that by the time medical students become seniors they have become definitely more cynical than the freshman. Furthermore there is a definite interaction between the three variables studied so that as cynicism grows their humanitarianism tends to diminish. Interestingly enough Prof. Eron found that the seniors who select psychiatry have the highest score in anxiety as well as cynicism.

What might be the nature of the circumstances in medical education which might possibly foster

the formation of attitudes the author studied, as well as other seemingly unhygienic reaction tendencies which have been noted in the literature. In going over the experiences of a medical student in the course of his training the following might play a part. First of all is the traumatic nature of the material handled. There is the initial experience with the cadaver, dying patients afflicted with chronic or hopeless disease. Initial experiences with physical, gynecological or rectal examinations, venereal patients, needling of various parts of the body. Then there is the fear of errors in diagnosis, fear of contagion, the threat of failure in school, the long term conflict over the dependent role the student usually must assume, the effect of limited recreational and social outlets. Then there is the growing realization of the student that persons will do implicitly what he orders despite his own sense of inadequacy in dealing with their problems. The postgraduate training is long delayed and financial rewards are also delayed and earlier frustrations are compounded.

Professor Eron's findings and the others whose work he corroborates must give some pause to the architects of medical school curricula. For here must be a fertile field for new experimentation. Surely a student who is spared anxiety is a more effective and motivated individual. One who overcomes cynicism is more likely to instill hope and confidence in his patients. One who develops his humanitarian impulses is most likely to gain increasing satisfaction from his calling.

It is certainly not true that these experiences are any more traumatic than they have ever been since the nature of the exposure to disease and medical study has not changed. If the student in the first shock of medical study tends to develop some seemingly unhygienic reaction tendencies, it is certain that they do not now and never have carried over into medical practice. There has not developed any weakening or alteration of the role of the doctor in our society. Society has given our profession the highest score in humanitarianism and the lowest in cynicism as compared to any other calling. In the

minds of the laity the image of the physician remains that of a benefactor of humanity. He is still heir to priestly tradition and continues to be accorded a respect and awe which is unique in our culture.

How long this condition will prevail will depend upon many factors but also upon ourselves. There is a growing turmoil in the world which is reflected in our society and in our lives. Powerful forces are at work which tend to undercut the societal role presently held by the physician. Our profession must remain alert and lead the way to a searching scrutiny of their origin and expose the selfish interests that promote them. Selfish interests are cynical, always in conflict with humanitarianism. By contrast some voices,⁵ devoted to a moral and intellectual revival have expressed fear that "the whole world is advancing towards chaos with a velocity that is unnerving." Many are openly voicing dissatisfaction with the "noise, speed, hypocrisy and trivialities" of the American scene. Some ask "Tho we gain in the ability to gratify our material wishes are we declining as a culture".

There is undoubtedly a growing discontent with the predominantly material aims currently held out to us. Some are already calling for greater activity in the direction of a moral and intellectual revival. Whence can such a force arise? Primarily from dedicated individuals devoted to the public welfare. Among the leaders in such a movement there will surely be a goodly number of medical men.

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L. N.

Radiation Study To Be Expanded In PHS Program

An expanded program of radiologic health services to physicians, to be financed by a requested \$805,000 appropriation, will be offered by the Public Health Service, said Dr. Francis J. Weber, chief of the new USPHS Division of Radiological Health.

"Our program envisages a two-way partnership with practitioners," Dr. Weber said in an interview. "We will be trying, in the next fiscal year, to

train as many physicians as possible in the latest diagnostic and therapeutic techniques in radiation and to inform as many of them as we can reach with up-to-date information on new developments in equipment, to help more medical schools establish post-graduate courses in radiation, to bring the fruits of an expanded research program to the clinical level.

"But because we are really starting with a brand-new program, we have relatively little base-line data to guide us and we are, in a sense, groping in the dark. Consequently, we want to avail ourselves of all clinical experience which physicians may have accumulated in their practice with low-level radiation and thereby set in motion what we hope will be a fruitful two-way exchange."

USPHS, working through state health departments, hopes to encourage more local medical societies to take the initiative in starting radiologic health programs. As one example, he said that his office had assigned professional help to the Dade County (Fla.) Medical Society in conducting a survey of all radiation sources in offices of physicians and hospitals, following a request by the Florida Health Department.

Dr. Weber outlined the following additional elements of the expanded program:

1. More two-week courses in the fundamentals of radiation at the clinical level will be offered to private physicians, to take place at the Robert A. Taft Sanitary Engineering Center in Cincinnati.
2. More medical schools will establish full-time postgraduate training in radiation. About 15 schools have already created such programs with assistance from USPHS.
3. Latest information on rapidly growing uses of cobalt⁶⁰ in therapy and I¹³¹ tracers in diagnosis will be rapidly disseminated, along with new data on shielding and coning.
4. An epidemiologic survey will be undertaken, in cooperation with the National Office of Vital Statistics, to determine the effect of prenatal x-ray pelvimetry on the newborn.
5. More states will be encouraged to establish their own advisory commissions on radiation.

Construction of nuclear reactors by industrial concerns adds a new dimension to the radiation health problem, said Dr. Weber. He praised the health measures taken in connection with recent establishment of the giant Westinghouse reactor at Shippingsport, Pa., but added:

"What one fears, however, is that, as the number of such reactors increases, and given the usual competition that might well inspire steps to reduce costs, the proper health safeguards may not be provided for."



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Connecticut Medical Service Annual Report

At the 10th annual meeting of the Board of Directors of Connecticut Medical Service, Inc. held February 17 in New Haven, Dr. Louis F. Middlebrook, Jr., was elected President. Dr. Middlebrook, of Farmington, was Vice President of C.M.S. prior to his election and has served as Secretary since 1949 when the Blue Shield Plan for Connecticut started.

In his report of the President for the year 1958, J. Edison Doolittle, of Milford, highlighted the significant progress that had been achieved by the liaison committees of C.M.S. and the Connecticut State Medical Society in working out mutual problems in the interests of the physicians and people of the state of Connecticut.

He noted three primary accomplishments including the formation of permanent liaison committees by C.M.S. and the Medical Society. Both the C.M.S. Board of Directors and a committee of physicians, called the Medical Advisory Committee, have been expanded in number to afford broader representation for C.M.S. in fulfilling its responsibilities as a voluntary prepaid medical service organization.

Mr. Doolittle's report of the president continued by outlining the two major challenges which face C.M.S. in the coming months. First, he stated the need for C.M.S. to provide a realistic answer to rising incomes and costs of living by reflecting appropriate income limits for the full-payment Service Benefit features of C.M.S. contracts.

The second challenge outlined by Mr. Doolittle was the need for making the advantages of basic surgical-medical care coverage through C.M.S. available in conjunction with the present demands for expanded medical care coverage commonly described as major medical.

Mr. Judd, of Hamden, Chairman of the C.M.S. Board of Directors, in his report to Connecticut for the Board of Directors acknowledged the completion of 10 years of service to the people of Connecticut, and noted that C.M.S. has become an accepted instrument of community service. He pointed out that C.M.S. would continue to seek means of providing voluntary prepaid surgical-medical care to meet the needs and requests of the community C.M.S. serves—the people of Connecticut.

In his report on the administration of C.M.S., Dr. William H. Horton, of Windsor, Executive Director and Director of Medical Services, stated that the amount of membership charges that was devoted to operating expenses to process claims, maintain

records, secure new members and for general administration represented only 9.5¢ of each dollar, a decrease from the 10¢ of each dollar needed in 1957 and well below the 10.3¢ 10 year average figure. At the same time, Dr. Horton reported that the number of claims paid increased by 6% to a new record total of 260,945 or well over 1,000 each working day. Dr. Horton's report indicated that claim payments for services covered by C.M.S. were accepted as full-payment service benefits in 49.7% of the cases paid during 1958. This invaluable contribution for members with incomes that are below levels specified, he said, has been made possible by the C.M.S. Participating Physicians who accept amounts listed in the fee schedule as their full payment for these services. General support of this full-payment Service Benefit principle is further indicated in that physicians have accepted the C.M.S. payment in full satisfaction for these services for an additional 15% of claims processed through C.M.S., he added.

At the end of 1958, there was a total of 3,053 physicians who had signed agreements to accept the C.M.S. payment as their full satisfaction for the covered services when rendered to a member who qualified for full-payment Service Benefits, he said. This represented an increase of 115 physicians during 1958.

Other officers elected for 1959 include Robert S. Judd, of Hamden, who was re-elected to the position of Chairman of the Board for his fourth consecutive term. Mr. Judd previously served as President for seven years. John Coolidge, of Farmington, was elected Vice-President, a position he has held since September 18, 1958. Mr. Coolidge served as a member of the C.M.S. Board of Directors for six years prior to becoming Vice-President. Dr. Walter I. Russell, of New Haven, was elected Secretary after having served on the Board of Directors since C.M.S. started in 1949, and Carl G. Freese, of Hamden, was re-elected to his sixth term as Treasurer.

Re-elected to the Board of Directors in addition to those named above were: Dr. Henry A. Archambault, of Taftville; Frederick M. Daley, of Shelton; J. Edison Doolittle, of Milford; Dr. C. Louis Fincke, of Stamford; and William G. Gumbart, of New Haven.

New physician members elected to the Board of Directors include Dr. Harold M. Clarke, of New Britain; Dr. Frank L. Polito, of Torrington; Dr.

(Continued on Page 283)

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Michael A. Dean, of Bridgeport; Dr. Israel E. Blodinger, of New Haven, who were appointed by the Council of the Connecticut State Medical Society. Two new members who were elected after their nomination by the Nominating Committee of the C.M.S. Board of Directors are Joseph V. Cronin, of Hartford and J. M. C. Betts of New Haven.

A newly created Medical Advisory Committee has been established to replace the Professional Policy Committee and according to C.M.S. afford broader representation to the medical profession in serving as an advisory committee to the C.M.S. Board of Directors on professional matters. The present incumbent members from the Professional Policy Committee are: Dr. Henry A. Archambault, of Taftville; Dr. John D. Booth, of Danbury; Dr. Gray Carter, of Greenwich; Dr. Edwin R. Connors, of Bridgeport; Dr. Philip M. Cornwell, of Hartford; Dr. Rembrandt H. Dunsmore, of Hartford; Dr. Edward Howe, of Hartford; Dr. Roswell D. Johnson, of New Britain; Dr. Sidney R. McPherson, of Hartford; Dr. William J. Neidlinger, of Hartford; Dr. Allan J. Ryan, of Meriden; and Dr. Harold E. Speight, of Middletown.

Members appointed to the Medical Advisory Committee for the first time include: Dr. Louis Backhus, of Waterbury; Dr. Frederick Beardsley, of Willimantic; Dr. Cleveland R. Denton, of Hartford; Dr. Francis Gallo, of Winsted; Dr. Louis Harris, of Hartford; Dr. Arnold Janzen, of Hartford; Dr. Frank L. Polito, of Torrington; Dr. C. John Satti, of New London; and Dr. Philip Sheridan (D.D.S.), of Hartford.

New Treatment Approach Suggested For Emotional Illness

A new approach to the treatment of emotional illness has been suggested by two New York psychoanalysts.

They believe that many emotional illnesses are at least partly the result of a person's "quest for certainty." The neurotic behavior represents a means of obtaining certainty.

Most neurotic persons repeat their behavior over and over; they are certain of its outcome and refuse to risk trying a new approach to their problems.

Nearly all the categories of emotional illness may be interpreted as resulting from a quest for certainty, Emanuel K. Schwartz, Ph.D., and Alexander Wolf, M.D., said in the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

For example, the schizophrenic person withdraws from the threatening environment to the security of his own internally remade world; the depressed person feels that if he withholds all criticism, anger, and aggression, he will be certain not to provoke or to incur the dangers of the hostile and destructive forces around him.

The perfectionist feels that if he is perfect, if he is certain to make no mistakes, he cannot be punished or endangered. Even the hypochondriacal person uses his pills as a way of finding certainty. By taking them, he is certain that he can get through the day.

By approaching such patients through the concept of the search for certainty, psychotherapists may be able to help some patients toward a more healthy mental state, the authors believe.

The "quest for certainty" is tied up with an individual's ability to assess the probabilities of success or failure and safety and danger in a situation and his willingness to take risks.

A person with a healthy mental state is willing to take risks—sensible risks based on a realistic appraisal of the situation. He develops a certainty of what he can and cannot do, but also recognizes that absolute certainty is an impossibility.

Persons who refuse to take many risks are often persons who demand absolute certainty as shown by the outside situation or by a "feeling inside." They are unable to recognize that most situations present risks and uncertainties.

The authors said that the quest for certainty may be viewed as a person's attempt to cope with the anxiety that is always present when there is an unknown factor. The anxiety is a warning of possible danger. When the normal person is warned, he must evaluate the nature of the danger in terms of what is really there and what his chances are of managing it.

However, the neurotic does not do this. He has an unreal impression of the situation. He deals with a situation on the basis of his own ideas—not on the basis of observation and careful weighing of the real chances of success and failure. He must be certain according to his own concepts and not according to reality.

"Whenever all doubts are denied and all differences obscured, we face pathologic consequences," the authors said in conclusion. "Realistic psychological certainty is all a little uncertain; of this we may be certain."

Dr. Wolf is a member of the staff of the New York Medical College and Dr. Schwartz is on the staff of the Postgraduate Center for Psychotherapy, New York.



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News From Washington

Senators Urged to Vote World Research Aid Bill

Senate Labor and Public Welfare Committee is due to conclude hearings on the Hill-Fogarty resolution (S. J. Res. 41) authorizing \$50 million yearly to support medical research internationally. Dept. of HEW will present closing testimony, with Secretary Arthur S. Flemming and Surgeon General Leroy E. Burney heading witness array. While they probably will indorse the plan in principle, it's unlikely they will go along with a \$50 million annual budget.

The committee has heard new appeals for passage of S. J. Res. 41. They were made in person by spokesmen for American Dental Assn. and President's Committee on Employment of Physically Handicapped, and in form of letters from a number of national organizations.

In a floor speech recently, Senator Hubert H. Humphrey (D., Minn.) said he believes the \$50 million authorization is fully justified. His special subcommittee which is engaged in a study of international health undertakings published a 66-page reference work on Federal laws dealing with research in medical sciences. Single copies will be mailed free on request by WRMS readers.

Committee Votes on Doctor-Draft Extension

Senate Armed Services Committee meet on HR 2260, which extends Selective Service Act, including section on military obligation of physicians and dentists. Supporting testimony was presented at hearings by Department of Defense and National Medical Veterans Society. Statements were filed by AMA and ADA. Dr. Harold W. Glattly, testifying for NMVS, suggested a statutory amendment that would free physicians from any further military liability after they have put in their two years of active duty.

Legion Head Hits Economy in Veterans' Health Care

Appearing before House Committee on Veterans Affairs, National Commander Preston J. Moore of American Legion deprecated fund-trimming where health services for veterans are concerned. "It would appear that those who believe the program providing for Federal hospitalization of war veterans is a prime target for economy have been remarkably successful," he said ruefully.

The annual National Rehabilitation Conference sponsored by American Legion ended four days of

sessions in Washington. Numerous resolutions were adopted, but none were on medical or hospital care, suggesting that no serious differences in this area of interest exist between the Legion's case workers and VA.

125,000-Bed VA Program Approved by White House

President Eisenhower has given assent to continuity of hospitalization at Federal expense for veterans with non-service-connected conditions. At the same time, in a policy letter to VA Administrator Sumner G. Whittier, the President has expressed growing need for the adoption of "a clear policy governing the role of the Federal government in providing facilities for their care." The White House communication indorses Whittier's recommendation that VA hospital system be pegged at a capacity of 125,000 beds.

In January, 1959, VA's average daily patient load was 115,195. Two-thirds of these in-hospital cases were in n-s-c category and the ratio is slowly but steadily rising month by month.

4-Way Policy Adopted

The White House stated that future consideration of construction or expansion of veterans' beds will be predicated upon: (1) Maintenance of complete and high quality care for service-connected cases; (2) accommodation of non-service-connected cases, within the 125,000-bed ceiling, but with recognition that "basic responsibility lies with other governmental jurisdictions for providing hospital care for all citizens who are unable to defray the expense of hospitalization;" (3) shifting of beds, even hospitals, from one type of use to another, at discretion of the VA administrator; (4) adherence to the 125,000-bed maximum.

Capitol Notes at Random

Two New York Democrats have added their names to lengthening list of House sponsors of the Forand social security amendment bill (HR 4700). They are Reps. Ludwig Teller and Isidore Dolinger.

Senator Warren G. Magnuson (D., Wash.) and Rep. Kenneth A. Roberts (D., Ala.) are co-sponsoring a bill (HR 5260) requiring stricter labeling on packaged substances that are toxic, corrosive, irritant or otherwise potentially dangerous.

For final quarter of 1958, AMA's lobbying expenses were reported to be \$11,086. Note: Issue of WRMS will disclose full year's expenditures for lobbying by national organizations interested in health and hospital legislation.

\$28.5 Million Asked by Military for Hospitals

House Armed Services Committee conducted hearings on Defense Dept. request for \$1.3 billion in construction authority. Included is about \$28.5 million for Army, Navy and Air Force medical and hospital facilities, main projects being as follows:

Army—150/300-bed hospital at Fort Eustis, Va., \$4.3 million; a medical laboratory at Fort Meade, Maryland, costing \$1.2 million, and \$0.8 million for rehabilitation of a 46-bed hospital at Redstone Arsenal, Alabama.

Navy—Naval Air Station, Lemoore, Calif., new hospital, \$2.3 million; \$0.9 million for hospital addition at Naval Station, Roosevelt Roads, P. I.; \$0.4 million for dispensaries at Pacific Missile Range, Point Mugu, Calif., and Naval Radio Research Station, West Virginia.

Air Force—Construction of new hospitals, totaling more than \$16 million, at Clinton, Sheppard, George and Clark Air Force Bases in Ohio, Texas, California and the Philippines, respectively.

45 Grants, Year's Last, Go For Research Building

Public Health Service has obligated all of the \$30 million available this year for grants to help finance construction and equipment of health research facilities. Latest awards will cover 45 projects, totaling \$4,861,944, at 40 institutions in 26 states. Universities receive largest sums: Univ. of Illinois, \$693,015; Univ. of Buffalo, \$516,977; Univ. of Wisconsin, \$392,779, and Duke University, \$388,000.

Other PHS-NIH research developments: Training committee in experimental embryology and development has been formed, with Dr. Louis Hellman chairman. . . . Toxicology study section has been created to review grant applications relating to chemical investigations.

Many Doctors Affected by Tax Court Decision

Recent ruling by U.S. Tax Court is of importance to those legions of physicians and dentists who take graduate training of one kind or another each year. While court's decision in this case lays down no general rule, it may prove to be an added incentive particularly to general practitioners to strive for greater professional breadth.

The facts, briefly, are these: Dr. John S. Watson, an internist, of Worthington, Ohio, underwent psychoanalysis and studied psychiatric techniques so that he might be a better practitioner of internal medicine. In 1954-55, training and travel expenses approximated \$9,000, which he deducted as a business outlay. This was disallowed by the Commissioner of Internal Revenue. Dr. Watson appealed to Tax Court.

"ORDINARY AND NECESSARY"

Before the Tax Court, the Commissioner held that it is not "customary" for a doctor to spend money for analysis and psychiatric training, therefore Dr. Watson's expenditure did not qualify as an ordinary and necessary expense for tax purposes. But this did not impress court, which said in part:

"It is in the realm of common knowledge that many physicians ordinarily continue to enlarge their medical education after their fundamental training has been completed and they have embarked on their practice. . . . He (Dr. Watson) took the course, not for the purpose of becoming a specialist as a psychiatrist, but for the purpose of better carrying on his own practice. . . . We hold the claimed deductions should be allowed." And that, it might be added, is final.

Medical Care Urged for Federal Workers Abroad

Two high ranking members of House Post Office and Civil Service Committee introduced identical bills to provide liberal medical and hospitalization benefits for Federal workers, and their dependents, at overseas stations. Sponsors are Reps. James H. Morrison (D., La.) and Joel T. Broyhill (R., Va.). Former is chairman of a newly formed subcommittee that will consider this legislation and Rep. Broyhill is ranking minority member of the subcommittee.

Reps. Morrison and Broyhill also are among co-sponsors of a bill giving prepaid health insurance, chiefly at Federal expense, to government workers. Action on this measure, however, is nowhere in sight; in fact, its existence was not even recognized when work was divided among the new subcommittees.

A-Hazards to Workers Subject of Hearings

Joint Congressional Committee on Atomic Energy will open a round of public hearings on employee radiation hazards and workmen's compensation. Originally the hearings, all of whose participants will be experts in their fields, were scheduled for last spring. Opening day witnesses include Dr. Shields Warren, pathologist; Dr. Charles R. Williams, Liberty Mutual Insurance Co., and Lauriston S. Taylor, National Bureau of Standards. Before hearings end the committee will have heard presentations on existing laws and regulations, proposed changes, employer and union programs, etc.

Rep. Melvin Price (D., Ill.), chairman of subcommittee conducting hearings, said: "I am hopeful that these hearings will serve the double purpose of providing a forum for discussion of the many complex problems involved in this important

aspect of peacetime atomic development and of compiling pertinent information for the guidance of state and Federal governments. Such action is necessary, in my opinion, if we are to avoid a hodgepodge of conflicting laws and regulations governing the peacetime uses of atomic energy."

Murray-Dingell

National health insurance bills introduced in Senate and House are S. 1056 and HR 4498 sponsored by Senator James E. Murray (Mont.) and John D. Dingell (Mich.), Democrats. Action on this bill is likely to come first—if it comes at all—from Senate Labor and Public Welfare Committee. Senator Murray said it is "wryly amusing" that AMA today is unopposed to Federal grants for training of public health personnel, aid to medical research, hospital construction subsidies and several other components of the original Wagner-Murray-Dingell bill of the 1940's.

Social Security

Senator Richard Neuberger (D., Oreg.) informed Senator Thomas J. Dodd (D., Conn.) he wishes to be a cosponsor of S. 1025. This bill, now pending in Senate Finance Committee, would ex-

tend social security coverage to physicians. Other than the clergy, they are the sole occupational group excluded from this program.

Retirement Plans

Senator John Sparkman (D., Ala.) obtained additional cosponsors for his bill (S. 1009) which allows all taxpayers—not exclusively the self-employed—to establish retirement plans with tax benefits.

Krebiozen Crusade

Rep. Roland V. Libonati (D., Ill.) continued Congressional Record campaign for recognition of krebiozen in cancer therapy. AMA and American Cancer Society are main targets.

\$14.2 Million Awarded by NIH in Research Aid

National Institutes of Health awarded total of 811 research grants and 217 fellowships with a combined value of \$14,243,065 last month. Projects receiving grants for first time numbered 345, the remainder receiving continuing support. The new research awards go to 195 institutions in 40 states, Hawaii, Puerto Rico, D. C., and Denmark, Switzerland, Philippines and Australia.

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Murray-Dingell Warming Up Socialized Medicine

Senate and House hoppers received identical bills to introduce compulsory national health insurance. The sponsors are, of course, Senator James E. Murray (Mont.) and Rep. John D. Dingell (Mich.), Democrats. They promise their plan will "provide the one thing needed to furnish an adequate health program to the people of the United States."

Voluntary Way Lacking Say Murray and Dingell

Compulsory national health insurance must be adopted to fill a need because the voluntary system "has failed entirely to reach a third of the people." Senator Murray and Rep. Dingell reach that conclusion in joint statement explaining objectives of their new measure. Bill is substantially the same, in its insurance features, as the original Wagner-Murray-Dingell bill of decade and a half ago. Employers and employees share the cost, with the latter contributing a maximum of \$90 a year for complete health care of themselves and dependents.

In its financing features, the bill does not rest on taxation mechanism, a deliberate omission to heighten chances of its being referred to House Commerce Committee rather than Ways and Means Committee. Rep. Dingell is a member of former group. In Senate it probably will be handled by Labor and Public Welfare Committee, on which Senator Murray ranks next to chairman, rather than Finance Committee.

Neuberger Sees Himself As Cancer Fight Symbol

Senator Richard L. Neuberger (D., Oreg.) took his Congressional seat recently for first time this year. He told a news conference he feels fit, following surgery for cancer of testis, and expects to run for reelection next year if his health permits. Until his illness, he was about decided to return to writing for a living but now he feels obliged to stay in the Senate, with the voters' assent, in order to work the more effectively for increased cancer research appropriations, said the 46-year-old Oregonian.

"But for this illness, I'd be just another liberal Democrat. Now I have an opportunity to be an exhibit on importance of medical research." Note: He'll testify before House and Senate appropriations committees to urge fund increases.

HEW Unveils Report on Medical Care of Aging

Some lively debating punctuated Dept. of HEW preview of the comprehensive report it will submit to House Ways and Means Committee on subject of health services for the aged. One of the more spirited exchanges involved AFL-CIO's Nelson

Cruikshank and AMA's Leonard W. Larson. They agreed that portions of the report are "biased," only Cruikshank held that language was tilted in subtle opposition to Federal participation and the chairman of AMA's trustees insisted it leaned in the opposite direction.

In places the report seems to imply that Federal action now is not indicated. For example: "A compulsory program to provide insurance against the cost of hospital care for OASDI beneficiaries or other aged persons (as in Forand bill) would in large part undercut voluntary efforts." Elsewhere are expressions implicitly sympathetic to U.S. intercession.

The lengthy document contains chapters on characteristics of OASDI beneficiaries; expenditures for hospital and medical care of the elderly; factors influencing costs of health services; organized methods of financing hospital care; methods of furnishing OASDI beneficiaries with hospital and nursing home benefits both within and outside the social security structure.

"The way in which the total amounts spent for health are divided among research, prevention and different types of service will be of growing importance," report says. "In this respect, we may be approaching a crossroad. It is possible that the factors leading to increased use of in-hospital care and those leading to relatively more use of out-of-hospital services are coming into a new balance."

Thinner Purse Confronts Research Facility Group

National Advisory Council on Health Research Facilities opens its first meeting of 1959 facing mounting number of requests for grants to help build research laboratories and prospects of a smaller budget. Eisenhower Administration wants outlay cut from \$30 million to \$20 million in 1959-60. Against this, the Council has already approved \$17.6 million in awards and probably will pass favorably on another \$9.1 million in applications. In addition, upward of \$15 million in new applications will be received in next 12 months, to be screened at Council meetings.

There is every indication that House and Senate will overrule White House and restore this fund to its customary \$30 million level.

Nursing Subsidy Backed; News Notes From Capitol

Senator Hubert H. Humphrey (D., Minn.) introduced S. 1118. This is companion bill to Rep. Edith Green's (D., Oreg.) HR 1251, which authorizes \$200 million over five-year period to support construction, teaching costs and scholarships in

collegiate nursing. Rep. Green has received letters indorsing bill from state nursing associations of New York, Alabama, Kansas, Connecticut, Colorado, Tennessee.

World Welfare Programs Subject Of New Compend

Mrs. Ida C. Merriam, director of program research in Social Security Administration, has put together a useful monograph, "Social Security Programs Throughout the World, 1958." By narrative and charts, the 93-page report describes all welfare legislation and undertakings in countries falling within the alphabetical range of Afghanistan to Yugoslavia. Health and maternity insurance is dealt with in separate sections. The publication is purchasable (\$1) from Supt. of Documents, Washington 25, D. C.

Republican Libonati Keeping Krebiozen Issue Alive

Rep. Roland V. Libonati (D., Ill.) is persevering in efforts to have ample clinical trials given the controversial cancer drug krebiozen. He twice placed in Congressional Record material bearing on the issue, his principal purpose being to back up Senator Paul Douglas (D., Ill.), who took initial steps with National Cancer Institute for clinical testing of krebiozen. Rep. Libonati, elected to Congress last year to fill a vacancy, was vice chairman of commission named by Illinois legislature to investigate role played by Dr. Andrew C. Ivy in development and promotion of the drug.

In Congressional Record for Feb. 12 (pg. A-1037), Rep. Libonati discloses text of recent correspondence by Dr. Ivy with Dr. J. R. Heller, director of National Cancer Institute. It goes into problems that have delayed inception of clinical investigation, conditions under which Dr. Ivy would serve as a consultant, press charges and counter charges, etc.

Doctor-Head of AmVETS States VA Care Views

Rarely is a physician elected head of one of the major patriotic organizations. AmVets holds that distinction this year, with a Georgia psychiatrist its national commander. He is Dr. Winston E. Burdine. He went before House Veterans Affairs Committee to outline AmVets' legislative goals. On medical benefits, he recommended that the Veterans Administrator have a freer hand in utilization of hospital facilities, unhindered by Budget Bureau rules. On the controversial subject of non-service-connected care, Dr. Burdine said:

"If this humanitarian policy were ever discontinued, I am confident that the quality of VA medi-

cine would deteriorate. . . . If the care and treatment program were limited to service-connected, there would be little incentive to practice VA medicine. . . . I want to make it crystal clear that AmVets will not condone abuses in this program."

Keogh Bill Advancing Over Treasury Protest

Ways and Means Committee will file favorable report in House on HR 10 urging passage of this pension plan. Realizing measure will be stopped in Senate, if it can be stopped at all, Treasury wrote Finance Committee Chairman Harry F. Byrd that HR 10 should be defeated because it would entail a \$365 million annual revenue loss. Further, it would constitute a precedent for special tax favors to greater numbers, the Treasury argued.

Forand Files New Bill; AFL-CIO Urges Hearings

Rep. Aime J. Forand (D., R. I.) introduced his new social security bill (HR 4700). Immediately AFL-CIO called for hearings at once but there is still no sign when Chairman Wilbur Mills (D., Ark.) will clear way for Ways and Means Committee consideration. The bill offers hospital and surgical care to OASDI beneficiaries and, in comparison with last year's version (HR 9467), permits wider choice of doctor.

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Letters To The Editor

Bridgeport, Connecticut
February 14, 1959

Dear Doctor Nahum:

I was asked by Dr. Penner to write you concerning my impressions of *Trauma And The Search For Objectivity* by Dr. Yale Koskoff in CONNECTICUT MEDICINE January 1959.

As a neurosurgeon who has only recently come to Bridgeport, I have not as yet been called on to testify in any of the accident cases I have attended. However, I do appreciate Dr. Koskoff's point of view. The subjective reaction of different patients to almost identical compensable injuries varies greatly. Some take the pain and disability in their stride—others become worried, fearful and very much upset by their injuries. Certainly the overt objective findings cannot always be related directly to the patient's overall disability. On the other hand, it is also very difficult to differentiate true emotional disability from that which is simulated. Sometimes the two seem to be inseparably mixed.

In view of the large number of accident cases in this area, it would be of interest to read further articles by those experienced in this work.

Sincerely yours,

WILLIAM H. COOK, M.D.

Bridgeport, Connecticut
March 2, 1959

Dear Doctor Nahum:—

This letter is long overdue, as I have read the article several weeks ago—and an opinion is due.

Dr. Koskoff's paper is certainly thought-provoking—and makes the blood boil. With all due respect for psychiatry, I believe, it is gone too far, to lose all perspective of objectivity, as Dr. Koskoff does in his article. Medical opinion has to be based on some objective finding and not on conjecture.

There is a great split between physicians and the legal profession at present. Articles of such kind—though written by a doctor—only contribute to widening that breach.

Very truly yours,

FRANK F. NORTHMAN, M.D.

Stratford, Connecticut
February 5, 1959

My dear Dr. Nahum:

The recent issues of CONNECTICUT MEDICINE have been of increasing value to me as an internist. Of special interest was the lead article in the January

issue on *Trauma And The Search For Objectivity*. It is good to know that CONNECTICUT MEDICINE can be the forum for a carefully reasoned presentation of so important a subject which, though primarily medical, also involves allied areas of social responsibility.

Your results have demonstrated once again, that there are plenty of journals, but that too few have been good.

Very sincerely yours,

SIDNEY L. PENNER, M.D.

Autopsy Requires Written Consent

A physician who performs or participates in an unauthorized autopsy is subject to criminal prosecution.

Authorization for an autopsy must be obtained from the person entitled to custody of the corpse. The deceased's surviving spouse or next of kin usually has custody of the body.

Although a non-written consent for an autopsy may be legally sufficient in some states, a physician should not perform an autopsy without a specific written consent or authorization which he can produce as proof in the event of a subsequent challenge to his authority. (Sample forms are available from AMA's Law Division.)

Coroner: When death is due to violence or casualty or there is reasonable ground for believing that it has been caused in that way, the right to custody of a dead body vests immediately in a public official known as the coroner or medical examiner.

When this official has legal control of a body, he has the authority to perform an autopsy and is entitled to the body in the condition it was at the moment of death.

Therefore, it is important that a physician should not undertake to perform an autopsy without the consent of the coroner or medical examiner when the body is properly within the official's jurisdiction.

This holds true even though the surviving spouse or next of kin may have consented to the autopsy.

Jurisdiction: If the coroner or medical examiner authorizes the performance of an autopsy on a body which is not within his jurisdiction, he and those who perform the autopsy at his direction are liable to the surviving spouse or next of kin.

Therefore, it is equally important for the physician that he does not undertake to perform an autopsy on the basis of authority from the coroner or medical examiner unless he is sure that the official has jurisdiction over the body.

Obituary

JOSEPH D'AMICO, M.D.

1907-1959

Dr. Joseph D'Amico of New Haven died at his home at 12 Edgehill Road on February 11, 1959, after a long illness. Dr. D'Amico was born in New Haven on September 29, 1907.

After receiving his college education at the University of Alabama and graduating in 1933, Dr. D'Amico attended the University of Rome for his medical training and received his M.D. degree in 1937. He spent one year interning in Italy and received a license to practice in that country. Dr. D'Amico interned at St. Raphael's Hospital in New Haven in the years 1938-1939 and 1940-1941. He was licensed to practice in Connecticut in 1942 and began his practice at 197 James Street, New Haven, in 1943.

Dr. D'Amico was a junior assistant, attending on the medical staff at St. Raphael's Hospital. He belonged to the American Medical Association, Connecticut State Medical Society and the New Haven Chapter of the American Academy of General Practice.

Despite the fact that Dr. D'Amico was of a latter generation, he had many of the qualities of the old time family doctor. He had a closeness to his patients which endeared him to them. He will be sorely missed by those he treated so well, as well as by the many colleagues who were his close friends.

He is survived by his wife Leonilda and three children, Catherine, age 14, Cynthia, age 13 and Joseph Jr., age 10.

CHARLES H. PITEGOFF, M.D.

In Memoriam

CARPENTER, ROBERT M.—Stamford; Loyola University School of Medicine, 1916; practiced general medicine in Stamford for 39 years; president of the medical staff at Stamford Hospital and attending physician at St. Joseph's Hospital; served as president of the Stamford Medical Society and was a veteran of World War I; died February 7 at his home, aged 64.

D'AMICO, JOSEPH—New Haven; University of Rome, 1937; a native of New Haven, he graduated from the University of Alabama in 1933; following graduation from the University of Rome, he interned at St. Raphael's Hospital, New Haven, and engaged in general practice in that city in 1943; died February 11 at his home following a long illness, aged 51.

GOODRICH, WILLIAM A.—Hartford; Columbia University College of Physicians and Surgeons, 1935; practiced radiology in Hartford and West Hartford since 1948; member of the medical staffs at Hartford Hospital, Charlotte Hungerford Hospital, Torrington, and Johnson Memorial Hospital, Stamford Springs; he was Connecticut counselor for the American College of Radiology; past president and treasurer of the Section on Radiology, Connecticut State Medical Society; died February 11 at Hartford Hospital, aged 50.

KLEIN, ABRAHAM A.—Hartford; University of Louisville Medical College, 1929; started medical practice in Hartford in 1930 and was in active practice at time of his death; appointed police surgeon in 1932 and served as school physician for many years; died suddenly in Hartford Traffic Court March 3 after having testified in an accident case, at age 58.

TRACEY, WILLIAM W.—Norwalk; Columbia University College of Physicians and Surgeons, 1916; a prominent Norwalk surgeon, Dr. Tracey retired from practice some time ago, when illness beset him; his father practiced medicine in Norwalk and also his brother, Dr. Edward J. Tracey, who died in 1948; Dr. Tracey was a graduate of the Postgraduate Hospital, New York City; served in the Army Medical Corps in World War I and resumed medical practice in Norwalk thereafter; died February 14 after a long illness, aged 66.

AMA Head Calls For Periodic Retesting of GPs, Specialists

Practicing GPs and specialists were warned that they may be faced with loss of license if they fail to keep abreast of new developments in medicine. The admonition was issued by Dr. Gunnar Gundersen, president of the AMA, in an address to the Federation of State Medical Boards meeting here.

The AMA head offered a set of specific proposals to keep all physicians "on the ball." The key suggestion was re-examination at set intervals—probably every five years. Declared Dr. Gundersen:

"Years of experience have indicated that the quality of medical care will not be uniformly of the high standard that the public has every right to expect, without some definite stimulus."

Radiologists Seek Revised Health Plans

The American College of Radiology has taken the first step toward medical insurance revisions which, the group believe, will cut costs to patient, hospital and insurance carrier—and even minimize total radiation exposure.

The College approved a \$50-per-member voluntary contribution to pay for an intensive study of present insurance plans, and a broadened educational campaign aimed at carriers and policyholders.

Pending results of the study, College spokesmen think the job can best be done by providing coverage, in medical care plans, for diagnostic and therapeutic x-rays performed in the physician's office and the hospital outpatient department.

Book Reviews

YEAR BOOK OF DRUG THERAPY, 1958-1959 series. Edited by Harry Beckman, M.D. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, Illinois. 569 pp. with tables and illustrations. \$7.50.

Reviewed by LOUIS H. NAHUM

The book presents summaries of 493 articles from 23 countries and 108 Journals. In it may be found answers to such questions as what probably should be given with plasmin treatment of thrombi? Why is it useless to give an anti-histamine with penicillin in allergic patients? What cancer patients are most likely to respond to nitrogen mustard therapy of ascites? In what way is cortisone helpful in mumps orchitis? What is a common and insidious error in digitalis therapy? What are considered the first choice drugs in epilepsy treatment? What is a cardinal principle in steroid therapy? What is considered the most useful therapy for fluid retention in pregnancy? What unusual cardiac side-effects from Orinase have been described?

These questions are merely a few of the many problems related to drug therapy that are answered in this book. With so many drugs appearing every day it is impossible to know how to evaluate them especially if one depends upon the brochures brought by detail men. For this reason a book on drug therapy should be at the finger tips of every physician.

An excellent feature is the editorial comment which follows some of the papers reviewed. The book ends with an index to both authors and subjects. It is difficult to compare this volume with "Drugs of Choice" by Modell. Certain it is that each edition as it comes out will help to keep the student well informed on the present status of drug therapy in the very wide variety of diseases that the physician will encounter be he internist or general practitioner.

DISEASE AND DESTINY. By Ralph H. Major. The Eighth Logan Clendenning Lecture on the "History and Philosophy of Medicine"—University of Kansas Press, Lawrence, Kansas—\$2.00.

Reviewed by DENIS S. O'CONNOR

This small 47 page volume on "Disease and Destiny" should be of interest to everyone but especially to doctors because of the unquestioned influence disease has had on the pages of history. One cannot help thinking about what the acts or omissions of even one physician might have had on the course of international events.

The reminiscences about Dr. Clendenning have a special interest for the medical profession in Connecticut. His last public lecture two years before his death was delivered before the Connecticut State Medical Society.

THE SEDIMENTATION RATE OF HUMAN ERYTHROCYTES. By Frank Wright, M.D., F.A.C.P., F.A.S. Vantage Press, Inc., New York, New York, 1958. 43 pp. \$2.50.

Reviewed by DENIS S. O'CONNOR

This small volume of 43 pages presents the ideas of the author in regard to the misuse of the term "rate" as applied to the variations in the fall of the erythrocytes in a given period of time. He goes on to the contention that the rate of fall of the erythrocytes is a demonstration of energy variation in the individual and subsequently contends that the atomic

bomb blasts are manifested in the blood sedimentation rate of all individuals.

While this little booklet is certainly thought provoking from a philosophical point of view it is too abstruse to have any practical value to the physician as a physician.

MEDICAL DEPARTMENT, UNITED STATES ARMY PREVENTIVE MEDICINE IN WORLD WAR II. VOLUME IV. COMMUNICABLE DISEASES TRANSMITTED CHIEFLY THROUGH RESPIRATORY AND ALIMENTARY TRACTS. Prepared and published under the direction of Major General S. B. Hays, The Surgeon General, United States Army. Editor in Chief: Colonel John Boyd Coates, Jr., M.C. Editor for Preventive Medicine: Ebbe Curtis Hoff, Ph.D., M.D. Assistant Editor: Phebe M. Hoff, M.A. Office of the Surgeon General, Department of the Army, Washington, D. C., 1958. 517 pp.

Reviewed by JOHN R. PAUL

Those who served in the medical department of the United States Army during World War II can easily imagine the size of the task of documenting wartime experiences about certain diseases in the United States Army compiled from many different parts of the world during the years of 1940-46. Another aspect of this colossal task is that of presenting the data in an interesting fashion some fifteen years after the war is over. Consequently, great credit is due to the editors and the advisory editorial board of this series of volumes for compiling statistics which are so easily forgotten and events which can grow colder and more distant with each succeeding year. It may not be amiss here to compare this volume with a similar one put out a generation ago by the medical department of the U.S. Army, ten years after World War I. In the former volume there are good accounts of the Army's experience in the U.S.A., and in France, with a variety of infections and communicable diseases in 1917-18, particularly the account of the pandemic in influenza. However, the data from World War I was described by officers in the Medical Corps of the Army who could document the military experience particularly from a statistical standpoint, but were not necessarily authorities in the diseases which they had been asked to describe. In the present volume, on World War II, the chapter on influenza has been written by Dr. T. Francis, Jr., those on the exanthemata by Dr. Joseph Stokes, Jr., diphtheria by Dr. Aims C. McGuinness, streptococcal infections by Dr. Lowell Rantz—all acknowledged authorities on these diseases. The fact that the editorial board for this series of volumes were able to get authorities in these fields to write the various chapters on the medical history of that war is something unique. It goes back to the foresight and leadership of the late Brig. General James S. Simmons, who in 1941 with the able assistance of the late Dr. Francis G. Blake and Brig. General Stanhope Bayne-Jones, established what was known contemporaneously as the "Army Epidemiological Board." This Board did much to tackle, solve and describe the colossal problems of infectious disease in wartime and to draw upon the knowledge of civilian doctors who worked closely with the military. So effective was this venture indeed that the Board is still in existence.

Because of the authoritative standard of most of the chapters in this book, it cannot only occupy a place as a record of military medicine but as a textbook on the wartime behavior of infectious disease. It should be useful for clinicians, for students of statistical and clinical epidemiology as well as

those interested in medical history of World War II. It may be brash to suggest that in no previous war has there even been such an authoritative wartime record of the military and epidemiologic behavior of some 24 common and important communicable diseases—but with this brash statement the reviewer is in complete accord.

Special Notices

HARTFORD HOSPITAL

Saturday Morning 11 O'Clock Guest Speakers

March 28 to May 23, 1959

March 28—Perrin Long, M.D., Professor of Medicine, N. Y. State Medical College, N. Y. C.

10:00 A.M. Subject: House Staff Education—A Staff Responsibility

11:00 A.M. Subject: The Fat Is In The Fire

April 4—Elisha Atkins, M.D., Assistant Professor of Medicine, Yale Univ. School of Medicine. Subject: The Staphylococcus: Bacterial Enemy No. 1.

April 11—Maurice Victor, M.D., Assistant Neurologist, Harvard Medical School and Massachusetts General Hospital. Subject: Neurological Disorders Due to Alcoholism (Some Aspects of Classification).

April 18—George F. Bond, M.D., Commander, U. S. Navy Medical Research Laboratory, Navy Submarine Base, New London, Connecticut. Subject: Medical Aspects of Skin Diving.

April 25—Clyde Randall, M.D., Professor of Obstetrics and Gynecology, University of Buffalo School of Medicine.

10:00 A.M. Subject: To be announced.

11:00 A.M. Subject: To be announced.

May 2—New England Cancer Society. Program to be announced.

May 9—Subject: The Problems of Health Insurance. Speaker to be announced.

May 16—Virginia Apgar, M.D., Professor of Anesthesiology, Columbia-Presbyterian Medical Center, N. Y. C.

8:00 A.M. Subject: Anesthesia Seminar

10:00 A.M. Subject: Resuscitation of the Newborn

11:00 A.M. Subject: Pending

May 23—S. J. Thannhauser, M.D., Emeritus Professor of Medicine, Tufts Medical School. Subject: Case Presentation.

AMERICAN HEART ASSOCIATION

ANNUAL MEETING AND SCIENTIFIC SESSIONS

The 1959 Annual Meeting and Scientific Sessions of the American Heart Association will be held October 23-27 in Philadelphia. The Scientific Sessions are scheduled for October 23-25 at the Trade and Convention Center. The annual meeting of the national assembly, delegate body representing all program interests and geographical areas of the association, will be held in the Hotel Bellevue Stratford, October 26-27.

The American Venereal Disease Association will hold its annual meeting April 27 and 28, 1959 in the Auditorium of Johns Hopkins Hospital, Baltimore, Maryland, in cosponsorship with the United States Public Health Service of the Tenth Annual Symposium on Recent Advances in the Study of Venereal Diseases.



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Around The State

Fairfield County

The Stamford-Darien-New Canaan Heart Association is planning its fifth annual medical symposium April 30th in the auditorium of St. Joseph's Hospital, Stamford, starting at 9:15 A.M. Donald M. Kanter, Jr., is serving as chairman of the session and will moderate the morning gathering. C. Louis Fincke will be the moderator of the afternoon meeting.

CONNECTICUT MEDICINE congratulates St. Vincent's Hospital on their publication "St. Vincent's Hospital Medical Bulletin." Their first number appeared in December, 1958. Dr. Maxwell J. Antell is Chairman of the Editorial Board.

Middlesex County

Herbert Levine attended a one week, full time course on cardiovascular disease at Mt. Sinai Hospital in New York in February.

Franz Hasselbacher, who was a clinical director at the Connecticut State Hospital, has been appointed assistant superintendent. He succeeds Harry Whiting who became superintendent on January 1.

New Haven County

Barnett Greenhouse, M.D., presented a paper entitled "Clinical Experience With Chlorpropamide" at the World Conference on Chlorpropamide held by the New York Academy of Sciences in New York City, September 25-27, 1958. He also participated in a symposium on Phenformin (DBI) at Baylor University School of Medicine, Houston, Texas, February 6, 1959, and addressed the Harris County Academy of General Practice at Baytown, Texas on "The Clinical Value of DBI", on February 9, 1959.

The New Haven Medical Association has elected Dr. Theodore S. Evans as its president for the new year. Over 200 members attended the annual meeting held on Wednesday. Other officers include: Dr. Luca E. H. Celentano, vice president; Dr. Frederick H. Treder, recording secretary; Dr. Elliott S. Brand, financial secretary; Dr. Harvey W. Katz, chairman of the literary committee; Dr. Charles L. Corradino, finance chairman; Dr. Robert R. McDonnell, house committee.

Jean D. Hippolitus, M.D. is retiring from the New Haven Health Department after serving as a physician in both public and parochial schools for more than 30 years. Her retirement was announced

by Dr. Clement F. Batelli, director of the department.

Dr. Hippolitus is the wife of Dr. Luca Celentano, also a well known physician here and a commissioner on the Board of Health.

Dr. Hippolitus attended New Haven schools and graduated from the Connecticut College for Women in 1921. She received her M.D. from Yale University School of Medicine in 1925, and interned in San Francisco. She then entered private practice for a year.

She took the competitive examination for the position of school physician, received the highest grade, and began her work with the Health Department on August 1, 1928.

During these years, Dr. Hippolitus has examined thousands of school children, inoculating many of them against childhood diseases.

The New Haven Advertising Club has chosen Dr. Frank Mongillo, as recipient of its Gold Medal Award for 1959. He joins a long list of prominent New Haveners who have won the coveted honor.

Dr. C. T. Flynn, Jr., was elected president of the Meriden Medical Society at the annual meeting. Dr. John Burbank was elected vice president.

Others elected were Dr. Joseph Misuk, secretary; Dr. Richard Breck, treasurer; Dr. Michael Esposito and Dr. Ray Persons, program committee.

The following were elected as trustees: Dr. Henry Krochmal, Dr. Francis Giuffrida, and Dr. Robert Boyd.

Also elected were the advisory committee to Meriden Rehabilitation Center, Dr. C. T. Flynn, Jr., chairman; Dr. Henry Caplan, Dr. Alfred St. James, Dr. Francis Giuffrida, and Dr. Edward Wallace; public relations, Dr. Eugene Sillman, chairman; Dr. Albert Di Giandomenico, and Dr. Jerome L'Heureux; public health liaison committee, Dr. David McGaughey, III, chairman; Dr. John Flynn and Dr. William Hall; committee to study pre-paid insurance and care of aged, Dr. Allan Ryan, chairman; Dr. Joseph Zimmerman and Dr. Daniel Kahn; entertainment committee, Dr. Donald Badner, chairman; Dr. Samuel Robb and Dr. John Spignesi; and personnel committee, Dr. Frederick Glike, chairman; and Dr. Francis Tonkonow.

New London County

The March meeting of the New London County Medical Association was held on March 5 at the Norwich Inn, with dinner at 6:30 P.M. Speaker for the evening was Lee Buxton, professor and chairman of obstetrics and gynecology, Yale University, who spoke on the subject "Menstrual Irregularities and Infertility."

New State Welfare Prescription Procedure

The State Welfare Department spends approximately \$1,000,000 a month for medical services. Except for payments to hospitals and clinics the largest item of expenditure is for prescription drugs which amounts to \$107,390.31 each month for approximately 30,000 prescriptions.

Audit of actual prescriptions on file in pharmacies throughout the State has demonstrated a number of irregularities which have resulted in overcharges to the State Welfare Department as well as in several instances evidencing improper use of your prescriptions.

Considerable research has been carried out by the State Welfare Department on means to control similar abuses for the protection both of the physician and the State Welfare Department, resulting in the following procedure.

A special form entitled *Standard Prescription and Vendors Invoice* has been prepared for all State Welfare Department prescriptions. This form will be furnished to physicians in duplicate with interleaf carbons in books of 25 prescriptions and will serve both as a prescription and the pharmacist's certification slip. Whenever a recipient of Public Assistance or a State Ward needs medication the physician writes the prescription on the left half of the Standard Prescription form, and gives both copies to his patient. The patient presents both copies to the pharmacist, signing his name in the proper place on the right side of the form when the medication has been received. The pharmacist, after filling the prescription, enters the data called for on the right side of the form, retains the original copy and attaches the duplicate copy to his monthly bill for submission to the Welfare Department District Office.

The State Welfare Department will pay only for those bills upon which each line item charged is accompanied by a copy of the *Standard Prescription Form and Vendors Invoice*, signed by the physician and the patient, with the amounts dispensed, the cost and the charges properly extended in accordance with the Cost Standards, Drugs and Medications published June 1, 1956, and certified to by the pharmacist. Physicians and pharmacists may arrange between themselves to fill verbal prescriptions but in order to obtain payment the pharmacist must obtain a written and signed prescription on the Standard Prescription form before submitting his bill to the State Welfare Department.

The State Welfare Department expects to be able to establish the above procedure for payment for prescription items during March of 1959 in order to terminate, at the earliest possible date, the exploitation of both the State and the physician by some pharmacists. A definite effective date will be

enclosed with the instructions and initial supply of the prescription forms mailed to each physician. Pharmacists will also be instructed concerning the definite effective date at the same time.

Under the same effective date as the above, new instructions will be published by the State Welfare Department concerning the prescription of therapeutic vitamins, an area in which there has been considerable misunderstanding between physicians, pharmacists and the State Welfare Department in the past. These instructions are based upon the studies made by the American Medical Association and published in the Journal of the American Medical Association on January 9, 1959.

VITAMINS

Dietary Supplements or "Maintenance Vitamins". A multi-vitamin preparation supplying vitamins in amounts approximating the daily requirements of a healthy person and commonly offered as a dietary supplement is a food, not a medicine. If desired by a beneficiary or prescribed by his physician, such preparations may be purchased by the beneficiary out of his monthly award check. The Welfare Department will not pay for preparations of this type.

Vitamins for Infants. Up to the age of four years, multi-vitamin drops or equivalent preparations will be paid for only when the physician certifies on his prescription that the child's diet contains less than 30 mgm. of Vitamin C and less than 400 U.S.P. units of Vitamin D.

Therapeutic Vitamins. A multi-vitamin preparation to be accepted as a therapeutic agent must contain vitamins in amounts at least five times as great as are supplied by the dietary supplements discussed above. The Welfare Department will pay for them only when prescribed for diseases characterized by vitamin deficiencies. Diagnosis must appear on the prescription and prior authorization must be secured from the paying agency. The physician, in case of emergency and pending the pharmacist's clearance on prior authorization, may dispense the necessary vitamins for which he will be reimbursed at their cost to him. Payment will not be made for such preparations if prescribed as dietary supplements. No payment will be made for vitamin-and-mineral preparations.

Individual Vitamins. The above regulations will not apply to the prescription of individual vitamins for the treatment of specific pathological conditions, e.g.: B-12 in pernicious anemia or B-1 in certain neurological conditions. In such cases the diagnosis must appear on the prescription or the bill.

Submitted by:

JOHN P. BACHMAN, M.D.
Acting Medical Director
State Welfare Department

Relation Of X-rays To Malignancy Explored

The important role that survey work can play in medical research was underscored by Dr. Alice Stewart, Reader in Social Medicine, Oxford, England, in reporting on her studies of malignant disease in children before the Melbourne Medical Post-Graduate Committee in Melbourne, Australia.

Several findings prompted the search for a relationship between diagnostic x-rays and malignant disease, Dr. Stewart explained. First, there was evidence that the death rate from leukemia had increased almost twofold between 1938 and 1954 and almost threefold from 1931 to 1954. Over a corresponding period there was only a slight rise in the death rate from all malignancies and a marked fall in the death rate from all causes.

Second, Dr. Stewart continued, there was the interesting shape of the curve of frequency of leukemia death rates. Unlike other malignancies, the curve did not start at the lowest point but showed a primary peak at ages two to five (50 deaths per million per year). Moreover, the curve, after reaching a peak of 170 deaths per million per year, once again started to fall. In this respect also, leukemia was different from other malignancies.

Third, there was the finding that leukemia incidence was higher in the well-to-do, was more prevalent in the countries with advanced medical services, such as the United States, United Kingdom, and the Scandinavian countries, and was twice as common in American whites as in non-whites.

Finally, there was the point that all malignancies, while relatively unchanged in incidence over the last 20 years, showed a 61 per cent rise in the 0-4 age group and a 31 per cent rise in the 20-24 age group.

These four points raised the possibility in Dr. Stewart's mind of the relationship between improved medical services, especially the relatively recent widely introduced use of diagnostic x-rays, and this increased incidence.

The survey checked on the following points in the histories of 2,598 children: illnesses, treatments, x-rays, feeding habits, home conditions, pregnancy of the mother (including x-rays), health of other members of the family, and a number of similar questions. The only really significant point to emerge was as follows: when the incidence of maternal x-rays was assessed the following relationship was obtained:

	1299 CASES	1299 CONTROLS
Chest x-ray	117	102
Pelvic and abdominal x-ray	178 (13.7%)	93 (7.2%)

Other x-ray	10	10
Therapeutic x-ray	0	0
Occupational x-ray exposures	2	0

From this analysis, it was obvious that the only significant difference is that between the groups having maternal pelvic x-rays—twice as many cases of malignancies had fetal diagnostic irradiation. Subsidiary findings from the survey showed that leukemia (lymphatic and blast cell) was a disease having an excess in first-born children and that the number of films taken in the maternal x-ray procedure may have been a factor in causing leukemia.

In conclusion, Dr. Stewart stated, the practical risk of any one x-ray is small and must be weighed against the risks of not performing the procedure. But x-rays should not be done frivolously or routinely, she stressed. Moreover, the real cause of the peak of incidence of leukemia at two to four years has not been solved by the survey. To date there is inconclusive evidence from a new, as yet unpublished survey that this peak may be due to diagnostic x-rays in the first year of life, she said. (*Reprinted from Scope Weekly courtesy of Upjohn.*)



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Annual Meeting

The annual meeting of the Woman's Auxiliary will be held at the Sanford Barn in Hamden, Connecticut on April 29, 1959. The schedule is as follows:

- 10:00 A.M. Registration and coffee hour
- 10:30 A.M. Business Meeting — Mrs. Gratz, president, presiding
Social Hour
- 1:00 P.M. Luncheon
Introduction of guests
Guest Speaker—Herbert J. Kramer, Ph.D. "The Physician as Portrayed in Modern Literature"
Induction of Officers
Response of incoming President—Mrs. Walter Nelson, Middleton

Adjournment

Members of the Auxiliary are cordially invited to attend the annual dinner of the Connecticut State Medical Society on April 29th. Reservations to be made by members of the Connecticut State Medical Society.

Para-Medical Careers Recruitment Progress

As of today our Para-Medical Careers Recruitment program is very active. Some decidedly effective career guidance programs have been given in many of the high schools in the State. Only a few counties do not report much progress and it is felt that perhaps representatives from these counties have merely failed to notify the state office that they have contacted local guidance teachers.

Statistically, 44 high schools have already been contacted, and we now have recorded the names of 128 youths who have registered interest in at least one of the health related careers. From time to time they will be mailed helpful information about the career of their choice. At least 175 auxiliary members are serving as local contact representatives.

The depth and scope of these activities, both actual and projected, has met with an enthusiastic press response.

Dr. Harry C. Knight, Middletown, chairman of the committee appointed by the Council of the State Medical Society to develop this project has resigned, and the new chairman is Dr. Bernard F. Mann of New Haven.

This program is a long time effort to attract and hold the interest of our high school youth in the great need for additional personnel in all facets of Health Careers.

HELEN M. ALLEN

(Mrs. Edward P.), State Chairman

County Capsules

Fairfield—There will be a fashion show as entertainment for the annual meeting, April 21st, Fox Hill, Ridgefield. A "Foodless Food Sale" has swelled the A.M.E.F. contributions by over \$100.

Hartford—The recruitment committee held a hospital careers guidance clinic at Hartford Hospital to which students from 15 high schools were invited. Roger Eddy, author will be the speaker at the annual meeting on April 14.

Litchfield—Students from Torrington high school were taken on a field trip to Newington Hospital by the para-medical careers recruitment committee. The annual meeting in April will be held at the Torrington Country Club with the Litchfield County Medical Society.

Middlesex—Prospective members and interns' wives are invited to attend the regular meetings. Members contribute individually to A.M.E.F. The annual meeting will be a luncheon on April 15th.

New Haven—A tea was held for the internes' wives at Grace-New Haven Hospital. The annual meeting was held on March 26th.

New London—A recruitment tea for 35 potential nurses was held on February 19th, at the Pond House of the Joseph Lawrence School of nursing.

Annual meeting will be April 14th at the Norwich Inn.

Windham—The annual A.M.E.F. Dessert Bridge and Food Sale was held on Monday, March 16th at the Nathan Hale Hotel in Willimantic. April 4th is a program for the scholarship fund. Annual meeting on April 16th.

The Woman's Auxiliary of the State Society cannot sponsor the doctors art exhibit at the Connecticut State Medical Society Meeting this year.

A group of doctors interested in art will sponsor the exhibit.

All communication in regard to the art exhibit should be addressed to: Dr. John M. Freiheit, 85 Grove Street, Waterbury, Connecticut.

Manual and Child Guide Are Published by USPS

Latest publications of U.S. Public Health Service are "The Industrial Environment—Its Evaluation and Control" and "The Mentally Retarded Child at Home." Former is a syllabus of short courses given for industrial hygiene engineers and chemists at Occupational Health Field Headquarters in Cincinnati. Sized 8½ x 11 inches and containing 364 pages, the volume is purchasable (\$2.75) from Superintendent of Documents, Washington 25, D. C.

Mrs. Laura L. Dittman, Children's Bureau specialist in home training of the mentally retarded, wrote the 98-page guide in response to requests from parents and private physicians. It also may be had from Superintendent of Documents (35 cents). Or, as usual, through WRMS.

The Doctor's Office

Everett Bentley Baker, M.D. announces the opening of an office for the practice of general surgery at 117 South Main Street, Branford.

Rodolfo Di Massa, M.D. announces the opening of an office for the practice of general medicine at 39 Stonybrook Road, Stratford.

Joseph A. Moriarty, M.D. announces the opening of an office for the practice of general medicine, in association with Dr. James F. McKenna, at 106 Litchfield Street, Torrington.

William A. Whalen, Jr., M.D. announces the opening of an office for the practice of vascular, thoracic and general surgery in association with Dr. Edward J. Ottenheimer and Dr. James W. Major at 132 Mansfield Avenue, Willimantic.

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Blue Shield Conference

American medicine's partnership with Blue Shield in extending the benefits of prepaid medical care was the theme of the Annual Blue Shield National Professional Relations Conference held in Chicago in February.

The conference brought together a record total of more than 300 people, half of whom were physician trustees representing Blue Shield Plan governing boards and officers of 20 state medical societies. The executive secretaries of some 25 state and county societies and 130 Blue Shield Professional Relations personnel comprised the balance of the conference group.

In a keynote address, Dr. Louis M. Orr, of Orlando, Florida, President-Elect of the American Medical Association, commended Blue Shield for its "magnificent role" in developing the medical prepayment program, and urged "all members of the health team" to "recapture the pioneering spirit which was the foundation on which Blue Cross and Blue Shield were built."

"Let's stand together and stand united against the thrusts of big government into the medical care field," Dr. Orr urged. "And equally important, let's step up the current vigorous program to provide realistic positive approaches to all phases of health care among all people, young or old."

Referring directly to the needs of "senior citizens," Dr. Orr said he was "gratified that Blue Shield has been one of the first to pledge its all-out cooperation in working with the medical profession to do an effective job in providing medical care for the aged, especially the lower income group." He also commended Blue Shield's present accomplishments in developing a model contract for people over 65, and progress in removing age limits on non-group enrollment.

Calling for an ever greater effort in this area, Dr. Orr said that "the future of medicine and voluntary enterprise may well be determined largely by the extent to which Blue Shield and other voluntary financing mechanisms expand their coverage of the older citizens."

Other speakers before the conference were Dr. Donald Stubbs, of Washington, D. C., Chairman of the Board of Directors of Blue Shield Medical Care Plans; Dr. Leland S. McKittrick of Boston, Chairman of the A.M.A. Council on Medical Education and Hospitals; Dr. Carlton E. Wertz of Buffalo, President of Blue Shield Medical Care Plans; Mr. C. Lincoln Williston, Executive Secretary of the Texas Medical Association; Mr. Theodore Wiprud, Executive Director and Secretary of the Medical Society of the District of Columbia; Mr. Stephen F. Bonney, Deputy Director of Medical Surgical Care

in Kansas City; Dr. Max L. Lichter, Chairman of the Medical Care Insurance Committee of Michigan State Medical Society; Dr. George Halsey Hunt of Washington, Chairman of the Special Blue Shield Committee on the Aged; Dr. Ernest B. Howard of Chicago, Assistant Executive Vice President of the American Medical Association; Dr. Frank L. Feierabend of Kansas City, President-Elect of Blue Shield Medical Care Plans; and Mr. Harry Hine-man, Actuarial-Statistical Director of the Indiana Blue Shield Plan.

Dr. Stubbs emphasized the urgent need of better understanding by all physicians of the job that Blue Shield was created to do. "We've passed the point of no return in building voluntary health insurance in America," he said. "Without Blue Shield, the freedom of medicine would be lost. Blue Shield and the American doctor are identical in their basic purposes. Medicine seeks to relieve human suffering, while Blue Shield stands for service at the fiscal level. For the doctor, Blue Shield represents a balance of his ethical ideals with the fiscal needs both of his patient and himself. Medicine has come to grips with the economy of our modern world through Blue Shield."

Dr. McKittrick emphasized that Blue Shield must be recognized both by the profession and the public as a community movement. "We must have leadership in medicine that is imaginative, yet based on a complete understanding of the problems we are trying to solve," he said.

In his address concluding the conference, Dr. Feierabend stressed that "Blue Shield must be a continuing answer to a continuing problem," and he appealed to the profession to "take the initiative, accept its responsibilities, and exert the leadership that the American people expect of their doctors."

FURTHER EXCERPTS FROM ADDRESS BY DR. LOUIS M. ORR

"For the first time in history, legislation of the Forand type would add health benefits to a Social Security program that now pays cash benefits based on the 'floor of protection' concept. This new principle would completely alter the nature of the program, and would open the door for evolution of a system of tax-paid health care for the entire nation. Indeed, it would establish the principle that provision of medical care for any segment of the population, or all of it, is a federal function."

The present Social Security program is expected to cost seven times as much in 1969 as it cost in 1937. This experience "plus the revealing stories of government medicine in European nations, is evidence enough that the initial tax for so-called 'free' medical care will be just a drop in the bucket compared to what will be required in 10 or 20 years."

EXCERPTS—FRANK L. FEIERABEND, M.D.

Dr. Feierabend emphasized the need of Blue Shield to constantly improve its service to the public. This can only be done through the leadership of the medical profession.

Dr. Feierabend warned of the "socio-economic chaos that will result if Blue Cross and Blue Shield were to fail and the drastic changes in medical practice that would follow if the voluntary nonprofit Plans fall short of the job they have to do."

"We must have a plan that will provide medical care to at least 75 per cent of the public either on a complete service basis, or on a cash indemnity basis which is accepted on the service principle by the medical profession."

Whenever medical care has been taken over by the State, Dr. Feierabend said, "money was the common denominator which governed the service received by the public . . ." This has been shown in the English system, and again in the United States by our experience with Medicare.

EXCERPTS—MAX LICHTER, M.D.

Prepayment has provided a solution for the problem of extending the increasingly complex and expensive benefits of modern medicine to the people on the broadest possible scale, "permitting the partaking of the fruits of human ingenuity by the greatest number."

"The development of prepaid medical care is as much a part of medical technologic advance as the development of any purely medical discovery; for without it, people would not have been able to voluntarily partake of that which became available; and with it, advance has been encouraged if only by the widespread voluntary utilization of the new things in medicine. And it is something which was devised by doctors."

Relating the two-year history of the development of Michigan's new Blue Shield program, Dr. Lichter pointed out that the Medical Society's action was guided by an intensive survey of public and medical opinion, which showed, among other things, that people are willing to pay a reasonably increased rate for additional benefits.

The Medical Society "committed itself to a modernized concept of medical care coverage. Michigan Blue Shield accepted the challenge"—and immediately developed a program along the lines requested by the Society.

EXCERPTS—THEODORE WIPRUD

On the need of constantly bringing physicians and Blue Shield into better understanding, Mr. Wiprud said: "In my opinion, medicine's future is much more uncertain than most doctors realize. It looks to me as though we are going to have a diffi-

cult time holding the line against objectionable third party intrusion. A successful and acceptable program of voluntary health insurance, as I see it, is the only promising barrier to this eventuality. And when I speak of such a program I have Blue Shield primarily in mind . . ."

On the kind of material most effective in medical journals, Mr. Wiprud recommended

- 1) That reports or articles be brief, informative and interesting—avoiding dry, entirely factual reports.
- 2) That editorials contain at least one stimulating idea—avoiding generalizations and platitudes.
- 3) That all pieces be individualized and personalized in their approach to the reader.
- 4) Question and answer formats are recommended.

All writing should be "supported by a deep conviction on the part of both officers of medical societies and the Plans, that Blue Shield has a vital role to play in our society which justifies our faith in its future."

EXCERPTS—G. LINCOLN WILLISTON

Texas has developed a 19 point program of professional relations for Blue Shield, with the leadership being exerted by the Texas State Medical Association.

Three objectives of the program:

- 1) More effective liaison between the State Society and the Blue Shield Plan.
- 2) Better understanding of Blue Shield by the 8,000 doctor-members of the State Society.
- 3) To implant the conviction that Blue Shield is the doctors' program.

In a word, the objective is "education; informing physicians of existing problems, and securing their wholehearted cooperation in correcting them."

"We believe we have an effective portfolio of communication between Blue Shield and the Texas Medical Association."

Some elements of the program:

- 1) Medical Student Day program at three medical schools.
- 2) Blue Shield as part of Orientation Program, mandatory for all new members.
- 3) Representation of Blue Shield at all meetings sponsored by the State Society.
- 4) Speakers for Blue Shield at annual PR Conference and Conference of County Society officials.
- 5) Assistance to Blue Shield in presenting its story at each county society.
- 6) Blue Shield news and reports in every issue of the state society journal—also editorials.
- 7) Blue Shield advertisements in state journal.

- 8) Publication by Blue Shield of a Membership Directory of Texas physicians.
- 9) Promotion of Blue Shield enrollment through physicians.
- 10) Encouragement of doctors to control over-use of Blue Shield services.

EXCERPTS—STEPHEN F. BONNEY

"Prepayment is here to stay and the profession needs an efficient, knowledgeable fiscal organization to aid it."

"Blue Shield is not a third party but an integral part of the practice of medicine."

"Blue Shield must follow the practice of medicine. It cannot lead it, and it cannot police it."

"The success of Blue Shield means the preservation of the free practice of medicine."

"The basis of an effective professional relations activity is in the governing board of Blue Shield, for it is here that the really effective medical control is exercised."

Discussion groups of physician trustees, medical society executives and professional relations personnel of Blue Shield Plans concentrated their attention on ways and means of improving professional relations between the Plans and their spon-

soring medical groups, and of getting the story of Blue Shield across to all the physicians.

These discussions covered the methods of maintaining liaison; ways of involving physicians in the guidance of their Plans; helping doctors to play a leading role in the constant improvement of Blue Shield, so it can meet the needs of patients more completely; the necessity for medicine itself to lead in developing policy, formulating schedules of medical payments, levels of income for service benefits, etc.; and the importance of the individual doctor understanding the dynamics of Blue Shield and helping to conserve Plan resources as well as utilizing them most fully for the patient's benefit.

The discussion group of Plan professional relations personnel reported an emphatic agreement that physicians, individually and collectively, are the key to the success or failure of Blue Shield.

The following persons from your State attended the Blue Shield Professional Relations Conference reported in the attached release. To localize this story you may wish to include their names in your news report of the Conference.

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Experimentation in Man

The Committee on research of the Council on Drugs of the American Medical Association in an article entitled *Experimentation in Man* by Henry K. Beecher, M.D., recommends the following guarantees and standards:

- a. Study of relevant publications to avoid unnecessary repetitions of experiments;
- b. The physicians conducting experiments should have special knowledge of the problem and be completely responsible;
- c. Good organization and execution;
- d. Every available aid for special or emergency treatment of the experimental subject should be available.

Prior to experimentation the following aspects should be considered:

1. Can the experiment, wholly or partly, be carried out on animals?
2. What is the minimum requirement to obtain the observation? Is its importance and durations ethically justifiable?
3. What is the minimum requirement in altering the conditions of the experiment?
4. Are the requirements for the observation and the alterations of conditions the same?
5. What arrangements are planned? Is the project the fruit of mature thought and expert advice?
6. How will the results be used in obtaining a definite conclusion?

Risk, inconvenience or pain for the subject should be governed by these principles:

- a. The investigator's responsibility is more important than the willingness of the subject to accept the conditions;
- b. The investigator should consult other experts on the research project in order to intensify the sense of responsibility;
- c. The subject must be fully informed and must consent freely;
- d. If considerable risk is involved, the experiment is not in accord with the object and purpose of medicine;
- e. A practicing physician should not become an investigator on his own patient, if the experiment involves danger. A body of advisers should be consulted;
- f. Experiments should be discontinued if the subject so desires or if unexpected danger is encountered, activities the consequences of which cannot be undone, and which therefore cannot be discontinued, are therefore disapproved;

- g. Any suffering or danger not strictly inevitable must be prevented;
- h. Experiments on children; in institutions for children, old people, etc.; on the insane; or on prisoners, which involve dangerous risks, inconvenience or pain are not approved. All experiments on the dying under any circumstance are disapproved;
- i. The "utmost restraint" must be exercised in experiments on patients deemed to have an incurable malady, even though they volunteer as subjects;
- j. Unnecessary examinations should be avoided, and diagnostic activities that may be dangerous are justified only if they result in effective therapy. In routine examinations new methods that are dangerous should be strictly limited.

To understand the philosophy behind these recommendations one should read the entire report. The contents of the report is so basically important to anyone who may have occasion to do research that it should be reprinted in suitable format and be an integral part of any course of ethics in every medical school.

Reprinted from J.A.M.A., January 31, 1959.



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Atlantic City to Host A.M.A. Annual Meeting

Some 15,000 physicians will gather in Atlantic City, N. J., next June 8-12 for the 108th annual meeting of the American Medical Association.

Besides physicians, the meeting will be attended by residents, interns, nurses, technicians, students, and physician's wives and members of their families.

The five-day convention—the largest medical meeting in the world—is being held in Atlantic City for the 16th time. The first meeting was held there in 1900.

Doctors will have the opportunity to catch up on hundreds of aspects of a rapidly-changing medical world. This information will be presented in the form of scientific exhibits, lectures, motion pictures, panel discussions, televised surgical procedures, and industrial exhibits.

New medical research findings and methods of handling daily medical problems will be reported by 500 physicians in scientific papers or participation in symposium and discussion groups.

There will be over 300 scientific exhibits and a similar number of industrial exhibits on display at the famed Convention Hall. The latter group will be exhibited by pharmaceutical houses, medical equipment firms, and other manufacturers.

The House of Delegates will meet throughout

the week in the Traymore Hotel, headquarters for the meeting. The 20 scientific sections of the A.M.A. and five government medical services will also be represented in the House.

First order of business for the House will be the selection of a physician to receive one of medicine's highest honors—the Distinguished Service Award. He will be elected from three persons, whose names are submitted by the Board of Trustees. Nominees are screened by the Board from names submitted by the general membership.

The opening session will be addressed by Dr. Gunnar Gundersen, La Cross, Wis., outgoing president, and his successor, Dr. Louis M. Orr, Orlando, Fla.

A president-elect to serve one year and be inaugurated as president in 1960 will be elected during the meeting.

The Woman's Auxiliary to the A.M.A. will hold its meeting Tuesday through Thursday. Representatives of the 75,000 members—all doctor's wives—will discuss their program in sessions at the Chal-fonte-Haddon Hall.

For advance hotel and meeting registration information, contact the Convention Services Department, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.



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Autogenous Bone Marrow Infusions Curb Ray Effects

Deep-freeze storage of individualized bone marrow samples that may save the lives of those exposed to excessive radiation was proposed by a research team from the University of California at Los Angeles Medical Center and the Long Beach VA Hospital.

The group—Drs. N. B. Kurnick, Bernard H. Feder, James C. Gerdes and Andrew Montano—reported on the efficacy of autogenous bone marrow in repopulating marrow following massive therapeutic irradiation.

Their idea for personal marrow banks, the Western Society for Clinical Research was told, grew out of successful experiments on a number of supposedly terminal patients with widely metastasized cancers originating at various sites.

SLOW-FROZEN IN GLYCEROL

In four such patients, Dr. Kurnick and colleagues first withdrew by needle from the iliac crest, under local anesthesia, 100 cc. of bone marrow (containing about 3 billion cells).

Each sample was first slow-frozen in glycerol and stored in dry-ice chests at minus 79° C. Dr. Kurnick said the marrow has remained viable under these

conditions for as long as a year, and he sees no reason why it should not remain so indefinitely.

The four patients were then given intensive whole-body radiotherapy, with dosages in overlapping areas reaching as high as 2,000 r, about four times the generally accepted "lethal dose."

'DESERVES FURTHER STUDY'

A day after completion of radiotherapy, each patient was reinfused with his own stored marrow. No adverse reaction was seen.

One patient died of acute radiation injury six days after the completion of therapy. In the other three, the bone marrow became hyperplastic within three weeks of reinfusion and peripheral blood counts showed recovery within six weeks.

Control patients who were not reinfused with autogenous bone marrow after massive radiation—divided so as to be sublethal—still showed hypoplastic bone marrow four to nine months later. Concluded Dr. Kurnick:

"The approach deserves continued study for patients who are to receive rapid extensive radiation or bone-marrow-depressing chemotherapy. We are now using the method to treat lymphomas and radiosensitive tumors. The storage of bone marrow of normal individuals who are likely to be exposed to excessive radiation due to atomic reactor accidents may also be indicated."

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THE PRESIDENT'S PAGE

EACH year in the May issue of "Connecticut Medicine" it has become customary for the newly-elected President of your Society to initiate his series of "President's Pages" which will be published with each subsequent issue for the remainder of his term of office.

At this time it is therefore proper for me to extend my sincere thanks and appreciation to my many colleagues throughout the state for the honor which they have bestowed upon me. It is with deep humility that I assume the office of President in this venerable association. I shall attempt in every way to fulfill the duties and obligations of my office and to preserve the traditions of our Society.

To remind you that these are trying times is hardly necessary. Good fellowship and sympathetic understanding among physicians are prerequisites for normal internal functioning of our Society. Unresilient minds and cynical personalities will hamper the development of good public relations, will deter the advancement of educational and scientific programs, and will impede the solution of those medico-economic problems which arise in the long range rendering of good health care. This latter phase must be oriented in the light of our own and of our patients' socio-economic requirements.

It is highly essential to distinguish between *doctor-care* and medical care. It is unavoidable but excusable that these two terms have become synonymous in the minds of our patients. It is high time however that the sociologist, the economist, the politician, and the statistician clearly delineate in their representations to the public the relative places occupied by *doctor-care*, medical care, and hospital care.

We can no longer studiously seek to avoid responsibilities which we hitherto considered outside the realm of purely medical practice. Today, in this state, we are relatively fortunate, but you will note the term "relatively." There are clouds and rumblings nearby and in the distance. I refer to actions in the state and national legislatures and pressures from management and labor. All of these parties are occupying themselves with some facet of third party prepayment plans. We are no longer able to afford the luxury of apathy and procrastination.

It is to our advantage that the leaders of our Society have studied, and are continuing to study in the sphere of providing prepaid health care for the citizens of our state. Though progress has been made, all the hurdles have not been cleared. Nevertheless, I am convinced that by perseverance in our efforts, subsequent progress will be developed to augment a system of third party prepaid health care which, it is hoped, will be highly satisfactory not only to the citizens of our state but also to the majority of the members of our Society.

ELLWOOD C. WEISE, M.D.



Clinical Epidemiology Of Viral Hepatitis*

ROBERT W. McCOLLUM, M.D.

New Haven

ALTHOUGH its reported incidence has been steadily increasing for many years viral hepatitis offers no apparent cause for concern to most physicians since, for the most part, they are likely to see only sporadic cases. Explosive epidemics in the civilian population are uncommon in this country today. However, the relatively regular occurrence of both infectious and serum hepatitis year in and year out is a sufficient indicator of their constant endemic character and is a reason for considering their natural patterns of behaviour and the means presently at our disposal for controlling them. In spite of tremendous strides in the field of virology during the past few decades our knowledge of the agent or agents of viral hepatitis is still grossly deficient in many respects. The purpose of this review is to summarize present concepts of the clinical epidemiology of hepatitis with emphasis on recent findings and areas still in need of exploration.

HISTORY

Under a wide variety of names viral hepatitis has probably existed through the full extent of recorded medical history. It has been particularly associated with military campaigns and its high incidence during World War II provided the major stimulus for intensive study and research which added rapidly to our understanding of its natural history and established the existence of two forms, infectious hepatitis (IH or virus A) and serum hepatitis (SH, homologous serum jaundice, or virus B).

Infectious hepatitis is world-wide in distribution. In many areas high levels of endemicity have been observed over long periods of time. The geographical distribution and incidence of serum hepatitis is dependent in large part upon the medical practices of the area concerned. As "modern" medicine expands, its incidence is likely to continue to increase until effective control measures are found.

ETIOLOGY

The prime reason for the deficiencies in our present knowledge of hepatitis is the lack of any experimental animal or tissue culture system which is susceptible to the etiologic agent or agents.¹ The various reports of isolation and propagation of such agents in tissue culture² and in mice³ in recent years have not been confirmed to date.

Numerous experiments in volunteers have proved beyond much doubt that hepatitis is a common, though not invariable, manifestation of an infection by specific viruses. On the basis of observation of natural occurrence and by numerous well controlled experiments it is now generally agreed that IH and SH are caused by different though possibly quite closely related viruses which produce clinically similar illnesses. Whether there are several strains of each type of virus has not been definitely settled. These viruses are unusually hardy and extremely discriminating, i.e., they are highly resistant to the physical and chemical agents which inactivate or kill most microbial agents and they demand a human as their host.

There is no specific diagnostic test. Two hemagglutination tests employing rhesus monkey erythrocytes^{4,5} and chick erythrocytes^{6,7,8} have recently been described but both lack specificity. There are reasons to doubt that such agglutinins are directly

* Some of the investigations on which this work is based were carried out under the sponsorship of the Commission on Viral Infections of the Armed Forces Epidemiological Board, and were supported by the Office of the Surgeon General, Department of the Army.

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associated with the virus. Since presumably false positive as well as unexplained negative results are not uncommon, both tests require further evaluation and elucidation of their respective mechanisms before they can be put into general use. They are probably no more specific than the serum transaminase tests which are now being widely used for diagnosis.

Differentiation between infectious hepatitis and serum hepatitis may be extremely difficult on clinical grounds though there are certain features which may be of help. The onset of infectious hepatitis is likely to be rather abrupt and during the preicteric and early acute stages there may be a relatively high fever. Serum hepatitis, on the other hand is usually insidious in onset, perhaps with a long prodromal period, and the temperature is rarely more than slightly elevated, if at all. Liver function tests and liver biopsy do not distinguish between the two. Often one must depend on epidemiological features to make such a distinction.

Measurements of immunity are not possible due to the present lack of any specific serological tests. That there is little or no cross immunity between the viruses of infectious hepatitis and serum hepatitis seems quite certain.

EPIDEMIOLOGY

The virus of infectious hepatitis is basically an enteric one, dependent upon the intestinal-oral route for its spread from person to person. At times it may travel by way of an intermediate vehicle (food, water, etc.), but there is no known extra human reservoir or insect vector. There is a viremic phase and transmission can occur in the same manner as in serum hepatitis, but this route probably accounts for only a small minority of IH infections.

The incubation period of IH varies from 15 to 45 or more days. This variation may depend upon virus strain differences, dosage and possibly ill-defined host factors. The duration and severity of the disease appears to bear a direct relationship with age.⁹ In infants and young children a majority of the infections may go unnoticed but with increasing age the ratio of apparent to inapparent (icteric to anicteric) cases is reversed. Of basic importance in the epidemiology of this disease is the fact that intestinal excretion of the virus begins long before prodromal symptoms or jaundice appear¹⁰ and may continue throughout the acute phase of illness and into the convalescent period. Some infants may excrete virus for many months.¹¹

As with other infectious diseases the natural occurrence of infectious hepatitis follows a variety of epidemic and endemic patterns dependent upon the population at risk and the circumstances under which they are exposed. Probably the simplest,

but not necessarily the most common, epidemic form of this disease is that due to a common source infection, i.e., contaminated food or water. These have been described over a 20 year period. Examples include the massive, explosive epidemic involving a large segment of a city population which occurred when the water supply became grossly contaminated as happened in Delhi, India in 1956.¹² Common source infections are more likely to be seen on a smaller scale among military units or civilian organizations such as summer camps, etc.¹³ The source of the contamination frequently remains undetected. This type of epidemic is represented diagrammatically in Figure 1. In this

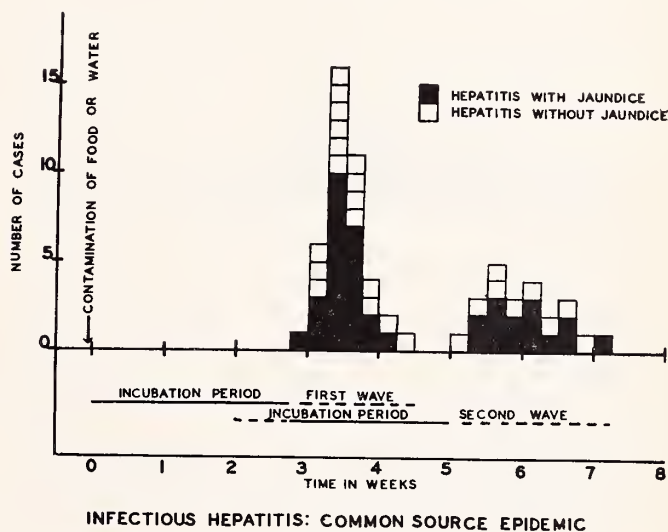


FIGURE 1

This is a diagrammatic representation of an epidemic due to the simultaneous exposure of a large group. Each square represents one case of hepatitis with or without jaundice. The incubation period varies from just under three to slightly over four weeks. The second wave represents cases infected by contact spread from patients in the first wave. Gamma globulin administered to such contacts at the peak of the first wave, or even later, could have obliterated or markedly suppressed the second wave.

instance a large group is exposed simultaneously to food or water contaminated from an unknown source (possibly an asymptomatic carrier or a case in the preicteric phase). Of the susceptibles some may escape evidence of infection, some develop mild symptoms without jaundice and still others develop the complete clinical illness with jaundice. However, all are potential disseminators of the virus. A sharp primary wave of cases will appear after the appropriate incubation period if the exposure has been restricted to a single occasion. The more prolonged the period of exposure the less sharp is the primary wave. This may be followed by a secondary wave over a longer interval which is due to contact spread during the relatively long period of virus excretion among cases in the first

wave. On the other hand the secondary wave may be markedly tempered or totally prevented by the appropriate use of gamma globulin in contacts.

A far less explosive form of epidemic due presumably to contact spread may be observed in schools or open institutions such as housing projects.¹⁴ In this instance the cases form a series of overlapping waves in a crescendo and decrescendo pattern.¹⁵ This type of epidemic is represented diagrammatically in Figure 2. Again the original source

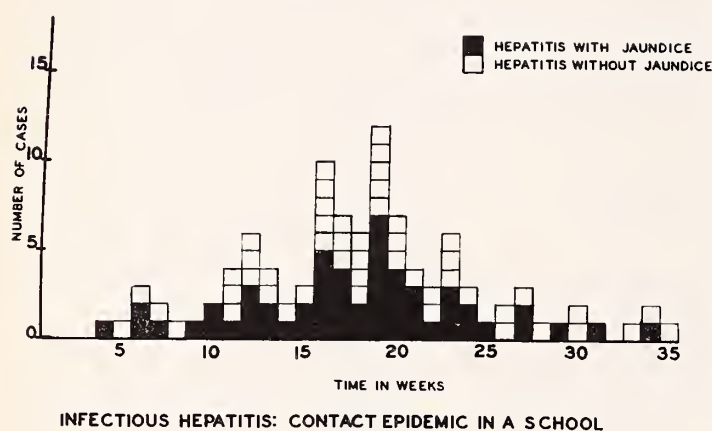


FIGURE 2.

This is a diagrammatic representation of an epidemic in an open institution such as a school. Each square represents one case of hepatitis with or without jaundice. The epidemic is seen to build up to a peak over a relatively long period of time by means of several overlapping waves and it subsides in the same manner. Secondary family epidemics, not shown in this figure, may be a prominent feature of such an outbreak.

of the virus is frequently unknown. The school population may be made up of both susceptible and immune children. The epidemic usually begins in one class or age group so that all children are not exposed to risk at the same time or to the same degree. If exposure is uniform and tends to be prolonged, the entire school is likely to be involved because of intermingling of different age groups. As the epidemic spreads the number of cases per unit of time tends to increase until the declining availability of susceptibles will not support full scale dissemination of the infection or until preventive measures are enacted.

Another type of epidemic pattern is restricted for the most part to military units which move *en mass* into an endemic area. In this situation large numbers of cases are likely to occur beginning one to two months later but the epidemic curve tends to fall between the two extremes shown above. In some instances, depending upon the degree of sanitary control attainable, the degree and type of contact between the troops and the indigenous population and the rate of addition or replacement of troops the period may be prolonged for many months or even years.¹⁶

The last epidemic situation to be considered is represented by the family group. This may well arise as a secondary manifestation of a common source epidemic, a school epidemic^{14,15} or a sporadic case, the source of which is unknown. Secondary attack rates in families are relatively high,¹⁶ presumably due to the intimacy of contacts between the individual members. Such epidemics are readily controlled by gamma globulin administration if the initial case is recognized. However, the primary case in a family is likely to be a child and in many instances the diagnosis is made only in retrospect when a secondary case occurs in an older member who develops frank jaundice. The family epidemic may be represented by a series of individual illnesses spaced from two to five weeks apart.

A discussion of the epidemiology of infectious hepatitis would not be complete without considering its endemiological patterns as well. The best documented endemic situation is represented by the closed institution, particularly orphanages¹⁸ and mental institutions¹⁰ where the infection eventually becomes endemic (Figure 3) with a sta-

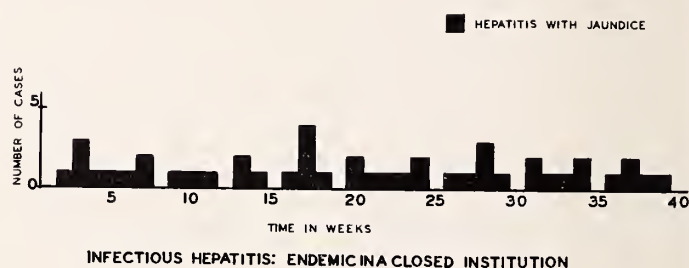


FIGURE 3.

This is a diagrammatic representation of a smoldering endemic situation in a large closed institution. Cases of hepatitis without jaundice are not shown since they are likely to be overlooked or diagnosed merely as gastroenteritis in such a situation. Although strict sanitation and personal hygiene could bring an end to such an endemic it is often difficult to enforce such measures effectively.

ble balance between hosts and agent. In a closed institution new individuals tend to be admitted at a relatively constant rate and when one considers the rather long incubation period of hepatitis, the long period of virus excretion, the crowding which tends to be a part of such institutions, the frequent difficulty of recognizing the disease in very young children it is readily apparent how such an endemic situation is perpetuated. Icteric hepatitis among nurses and attendants may act as the main indicator of the high level of endemicity which exists. In other words the disease may come to the surface because of its tendency to be more severe in adults than in children.

A second type of endemic pattern, the geograph-

ically endemic area, is undoubtedly a common one though it may be difficult to demonstrate. This was mentioned in connection with certain military epidemics. In relatively crowded and undeveloped areas hepatitis probably resembles poliomyelitis in that it is likely to be a routine infection of infants and young children and go unnoticed. This results in a highly immune adult population so that the disease, at least in the icteric form, appears not to exist. Proof of the endemic nature is provided by the arrival of susceptible visitors or immigrants who act as indicators when they become icteric. Often, in the case of immigrants or semi-permanent residents, the disease is delayed for several months because of self-imposed dietary and other restrictions, but when these barriers are relaxed infection may occur. Because of the relatively long incubation period the rapid traveller of today may find himself at home before symptoms appear.

One is left, in the end, with a need for an explanation of the occasional sporadic case of IH. More often than not one is likely to fail to find a satisfactory answer. It seems quite possible that there are hepatitis carriers, perhaps excreting virus only intermittently. There is no sure way of detecting such people. However, if they are employed as food handlers and, if intermittently certain food items, particularly those for raw consumption are contaminated, one could well account for many cases.

Contrary to infectious hepatitis, the other member of the family, serum hepatitis virus, is not known to have an enteric association. It gains entry only by parenteral inoculation and its only known mode of exit from the body is by way of the blood. Its transmission is dependent for the most part upon the use of human blood or blood products and upon medical, surgical and dental procedures in which a common needle, syringe or other instrument is used for multiple patients without adequate cleaning and sterilization in between. In a few instances it has been reported to have been transmitted by a tattooing needle or by a syringe and needle used in common by narcotic addicts. It has also been transmitted *in utero* from mother to fetus,¹⁸ but there is no other good evidence of its transmission from person to person by other than artificial means.

The world wide increase in the use of parenteral therapy, immunizations, blood and blood products probably accounts for the increasing frequency with which this disease is observed and for its wide geographic distribution. It is non-seasonal in its distribution. Serum hepatitis is no respecter of age or socioeconomic status. There are, indeed, a few occupations (physicians, surgeons, pathologists, laboratory and blood bank technicians) in which

the risk, and therefore the attack rate, is higher than in equivalent age groups in the population at large.

The virus of serum hepatitis appears to be distinct from that of infectious hepatitis which, however, can also be transmitted by the same means. In the latter instance the incubation period remains relatively short, whereas that for serum hepatitis is unusually long, from 60 to 180 days or more. The period of infectivity of the blood (viremia) may start as early as 87 days prior to onset of symptoms and may last for several years¹⁹ though these figures probably represent unusual extremes.

One might say that serum hepatitis is constantly endemic. Estimates suggest that up to 0.05 per cent of the presumably healthy adult population (blood donors) are carriers of the virus at any given time. Since most of these individuals give no history of hepatitis, have normal liver function tests, and do not go on to develop clinical symptoms of the disease it would appear that infections with virus B produce clinical hepatitis far less often than one might expect. On the other hand close observations of certain outbreaks of serum hepatitis and well controlled volunteer experiments indicate that from 15 to 50 per cent of healthy young adult males are susceptible to infection with resulting clinical illness.

Since human serum is no longer used as a medium for vaccines, explosive outbreaks of serum hepatitis such as those observed with the administration of certain lots of yellow fever vaccine during World War II are no longer observed. In a similar manner multiple cases arising from the use of units of human plasma derived from large pools are less commonly seen in this country since the use of such plasma pools has declined. In addition to serum and plasma, lots of human fibrinogen and thrombin have been implicated in small outbreaks. On the other hand human albumin (possibly on the basis of its method of preparation) and gamma globulin have not been incriminated as vehicles for the transmission of hepatitis.

Also far less common today are the epidemics associated with various syphilis, diabetic and other treatment clinics in which there was inadequate sterilization of needles and syringes. Recognition of this mechanism of transmission and the institution of proper preventive measures have essentially removed such epidemics from the scene in this country though infections apparently arising from injections or instruments used in dental procedures have been reported in recent years.²⁰ The most common source of serum hepatitis today is probably whole human blood. More often than not, because of the increasingly frequent use of multiple transfusions, it is impossible or at least impractical

to trace the exact source of the infection in an individual case. Even a retrospective check of the donors is unlikely to yield the culprit who may well be an asymptomatic, temporary or long term, carrier whose hepatic history and liver function tests are beyond reproach. It has been found through wide experience that "screening" of blood donors by costly and time consuming liver function tests is of little overall value.

PREVENTION AND CONTROL

Infectious hepatitis. Since the intestinal-oral route appears to be essential in the natural transmission of infectious hepatitis it is obvious that appropriate measures directed toward personal hygiene, general sanitation, food and water supply should be extremely effective in controlling the spread of this disease. The methods of applying these measures will vary according to the situation in which the disease occurs, e.g. a home, a school, an institution, a military organization, a camp or a community. The reporting of all cases and suspected cases is extremely important especially those occurring in a community where individual cases are likely to be seen by different physicians. Only through prompt and complete reporting to the local and state health departments can the epidemic potential become apparent early enough to make the best use of the control measures available.

Because of the relatively long incubation period the prompt administration of gamma globulin to those who have been intimately exposed, particularly adults, has proved to be of great value in the prevention of clinical symptoms. As little as 0.01 ml. per pound body weight has proved effective but under certain circumstances one might wish to employ a larger dose, e.g. in a debilitated person, a pregnant mother, etc. It should be pointed out that gamma globulin *does not* necessarily prevent infection and those protected by it from the clinical disease may well spread virus if they do not carry out the measures of sanitation and personal hygiene prescribed.

At the present time there is no method for the detection of healthy carriers of IH virus so there is no way of preventing their role in the spread of this disease.

Serum hepatitis (virus B) is thought to be transmitted only by human blood and blood products. Its control would appear to be a simple matter although this does not always prove to be the case. Certainly the proper cleaning and sterilization of needles, syringes, dental and surgical instruments, lancets, etc. is of prime importance. The recommended procedures call for autoclaving at 15 pounds for at least 20 minutes, or boiling for at least 30 minutes, or dry heat of 180° C. for 1 hour.

Until there is some reliable and relatively simple method for detecting carriers of serum hepatitis or of sterilizing whole blood and plasma the only means for reducing the incidence of the disease among those receiving these products is the exercising of extreme caution in their use. Each patient's needs should be carefully evaluated and balanced against the risk. Commercially prepared pooled plasma should be used only in the most extreme emergency. There is good evidence to suggest that liquid plasma stored at room temperature for periods of six months or longer is non-infectious,²¹ but very few hospitals have facilities for such processing and storage. Ultra-violet irradiation of plasma is far from being effective. The use of beta-propiolactone for the sterilization of whole blood and plasma is still under investigation.

Normal human serum albumin and gamma globulin have not been incriminated as causing serum hepatitis, but fibrinogen and thrombin have.

The control of blood donors would appear to be the obvious solution to the control of post-transfusion (either virus A or virus B) hepatitis. Certainly those with a history of hepatitis should be excluded, but the vast majority of infected blood is obtained from apparently healthy donors. There is no test presently available for the detection of either carrier or blood containing hepatitis virus.

The value of gamma globulin in the prevention of post-transfusion hepatitis which seems to consist both of infectious and serum hepatitis cases has not been thoroughly evaluated. Certainly one would expect the short-incubation variety to be prevented and on this basis one might be justified in administering gamma globulin to certain patients receiving transfusions. On the other hand, present supplies of gamma globulin are not sufficient to make this a routine procedure.

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Insanity In The Family

If it is true that people should not feel ashamed or disgraced if there is lunacy in the family, but that is no reason for relatives to proclaim the fact from the rooftops, according to Dr. James M. Northington.

Even though insanity may be considered no more of a personal shame than heart disease or pneumonia, there are good reasons for reluctance to make a conversation piece out of such an instance in the family.

After all, it is a well-known fact that syphilis may be the underlying cause of the insanity or that it may be a matter of inheritance—and the person who freely discusses such a case in the family may himself be considered a likely subject for the affliction. Needless proclamation of such a condition in a member of the family may well jeopardize his own future and that of his children because it is entirely possible that those who do or those who otherwise might associate with him would stand aloof from him in fear that he, too, may become afflicted with insanity or some feature of mental illness.

"Of course there is no need to be ashamed, but there is much wisdom in not proclaiming. And that is just the attitude that most . . . relatives take, *i.e.*, those of them who have not already developed the family failing." (*Clinical Medicine* 6:177, February, 1959.)

Obstetrical Factors In The Etiology Of Cerebral Palsy

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IT is the purpose of this presentation to survey certain recent observations, both clinical and experimental, which bear on the problem of the etiology of cerebral palsy.

Especially pertinent to this question is the report of Muller and Graham of Boston on 23 cases in which pregnant women suffered severe carbon monoxide suffocation (New England Journal of Medicine, 252:1075, 1955). In some of these cases both the mother and the fetus died; and in others the mother survived, while the fetus died. But there remained eight cases in which both the mother and the fetus survived, with the pregnancies continuing to term. The carbon monoxide intoxication had occurred at various stages of pregnancy, from the second month to near term. All eight children born of these pregnancies, when examined subsequently, showed a wide variety of psychomotor disturbances, such as mental retardation—in some cases amounting to idiocy—, hypotonia of the neck, hypertonia or spasticity of the extremities, anatomic anomalies and hydrocephalus. Two of the infants died. Postmortem examination of one, aged six days, revealed hydrocephalus; the other died nine days after birth from pneumonia and autopsy showed extensive softening of the basal ganglia. The anatomic anomalies and psychomotor disturbances observed in these children have been correlated by the authors with the month of pregnancy when carbon monoxide intoxication of the mother occurred and are presented in a table in the author's paper. The most common disorder encountered in these children was spasticity of the extremities which was present along with other psychomotor abnormalities in five of the eight children. In the five spastic children the time of the carbon monoxide suffocation had ranged from the third to the eighth month of pregnancy. There was one case of athetosis among the eight and in this instance the carbon monoxide intoxication had taken place in the eighth month of gestation.

There has been some question among students of carbon monoxide poisoning as to whether its destructive effects on brain tissue are attributable to the accompanying anoxia or to the toxic action

per se of the carbon monoxide. Insofar as the fetus is concerned, the balance of evidence favors the belief that the anoxia is to be incriminated because even in cases of fetal death from this cause the concentration of carbon monoxide in the fetal blood falls short of the concentration necessary per se to produce cell death. Here, then, are eight human cases in which intra-uterine anoxia, at varying stages of pregnancy, presumably caused such brain damage of the fetus that psychomotor disturbances eventuated which resembled, if they were not identical with, those characteristic of cerebral palsy.

The important role of anoxia in causing the signs and symptoms, as well as the neuropathologic changes, of cerebral palsy is convincingly demonstrated by the experimental studies of Windle, Pfeiffer, Frontera and their associates in San Juan, Puerto Rico. Through the good offices of the National Institute of Neurological Diseases and Blindness, a monkey laboratory has been established there which because of its extensive facilities, accoutrements and personnel, might properly be called a "Simian Lying-in Hospital." By proper timing of the mating of these monkeys in the laboratory, the day of conception is accurately known; the course of pregnancy in respect to abnormal bleeding or other pertinent phenomena is then followed with care and the fetus delivered by cesarean section shortly before the calculated date of confinement. The fetus then enjoys round-the-clock special nursing service, while psychologists and pediatricians make daily observation on the development of the monkey newborn. For instance, almost daily electroencephalograms are taken.

Now, in monkeys at cesarean section, it is possible to incise the uterine wall and by insinuating one's hand between the membranes and the uterine wall to deliver the entire product of conception intact with the two placentas in situ and the membranes unruptured. It has been found by trial and error that the membranes must be opened and the fetus delivered within 18 minutes if it is to survive. In other words, 18 minutes of anoxia under the circumstances described is regularly fatal. Dr. Windle and his associates have now a substantial number of cases on record in which the fetus was allowed to remain encased in the membranes for

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periods which ranged between 12 and 17 minutes and in which, despite this prolonged period of anoxia, the fetus survived. They have some beautiful motion pictures showing the fetus struggling in the amniotic fluid within the transparent membranes. Asphyxia neonatorum of the duration specified consistently induced symptoms of neurologic damage as was previously demonstrated by Windle and his co-workers in the case of other species, such as the cat and guinea pig. The symptoms included muscle fasciculations, nasal regurgitation, somnolence, athetoid movements, ataxia, convulsions, tremor, exotrophia, and status epilepticus. The most prevalent disorders were impaired locomotion, postural defects, failure of suckling reflex and somnolence. One infant monkey succumbed to a cardiac arrest early on the fourth day, others were killed at different ages for histopathologic studies, and quite a number are still living. Controlled histopathologic studies revealed petechial hemorrhages in the cerebral cortex in the one animal with status epilepticus. Other brains revealed primary neuronal lysis, changes being most marked in the cerebellar cortex, cerebellar nuclei, hippocampus and the brain stem reticular formation. In one case the nuclei of the mid-brain had been almost entirely destroyed. With the one exception mentioned, injury to the cerebral cortex was conspicuous by its absence. Dr. Windle and his associates, as well as your present speaker, have not lost sight of the fact that other adverse influences may contribute to neonatal morbidity, such as, nutritional deficiencies, viral infections, toxins, endocrine imbalance, hematological and hemodynamic factors, ionizing radiations, trauma, genetic factors, narcotism, prematurity, etc. Nevertheless, the observations cited on carbon monoxide poisoning and those of Windle and his associates on the effects of asphyxia neonatorum, can leave no doubt that anoxia, whether in utero or at birth, can produce the clinical syndrome of cerebral palsy.

During the past year two Danish studies have surveyed large series of cases of cerebral palsy in respect to possible obstetric etiology. In one of these studies by Brandt and Westergaard-Nielsen, 628 cases of cerebral palsy are surveyed from the viewpoint of their birth records (Danish Medical Bulletin, 5:47, 1958). As had been true of other such studies, two factors stand out with remarkably high values in the cerebral palsy children studied by Brandt and Westergaard-Nielsen when compared with healthy children: *prematurity* with a 27 per cent incidence and *neonatal asphyxia* with a 23 per cent incidence in the histories. The particular contribution made by these Copenhagen authors is that they correlate these factors with the clinical types of cerebral palsy. Thus, a his-

tory of prematurity was found in 50 per cent of their cases of symmetric spastic diplegia and paraplegia but was met in only 14 per cent of cases of spastic hemiplegia. In contrast, neonatal asphyxia was three and a half times commoner in this last group than among the symmetric spastic diplegias. A provocative finding in this study is the observation that in this entire series of 628 cases of cerebral palsy, not a single infant had been delivered by cesarean section. Now, it is true that cesarean section is less frequently employed in Denmark than in the United States, but in the last decade there has been an upward trend in abdominal delivery throughout the Scandinavian countries and it seems a little curious that, even with a low section incidence, not a single cesarean section should have been recorded in the deliveries of these 628 cerebral palsy cases. In a recent issue of an American obstetrical journal, the Obstetrical and Gynecological Survey, which has about 6,000 subscribers, I asked the question: Does any reader know of a cerebral palsied child who was delivered by *elective* cesarean section? Although that issue of the periodical was mailed to subscribers several months ago, I have as yet, received no reply to this query. Does any one here know of a cerebral palsied child who was delivered by *elective* cesarean section? There are doubtless some but a statistical answer to this question would be of some importance because with cesarean section done before the onset of labor, that is, *elective*, the possible trauma of labor would be completely ruled out. Quite obviously, accordingly, the answer to this question would help elucidate the frequency of cerebral palsy in cases in which the trauma of labor has been completely ruled out.

The other Danish paper referred to is by Preben Plum and is entitled "Etiology of Congenital Athetosis." It reviewed 478 cases of cerebral palsy with particular emphasis on the mutual relationship between icterus, blood type sensitization and asphyxia neonatorum. Severe icterus in the neonatal period had been present in 68 per cent of cases of athetosis, in 11 per cent of hemiplegia, in 17 per cent of the cases of paraplegia, and in nine per cent of the cases of tetraplegia. Likewise, a history of severe asphyxia was found more frequently in the cases of athetosis than in those of hemiplegia, paraplegia, and tetraplegia. Rh negative mothers with Rh positive infants occurred in 39 per cent of the cases of athetosis investigated, in 14 per cent of the cases of hemiplegia, in two per cent of the cases of paraplegia and in one per cent of the cases of tetraplegia. It is particularly important to note that Rh antibodies were found in a total of 23 cases of which 22 were cases of athetosis. It is well

established that athetosis is the usual form of cerebral palsy which follows kernicterus but it is less well known, as brought out by this paper, that severe asphyxia at birth is more likely to cause athetosis than other types of cerebral palsy, the frequency of severe asphyxia at birth in the present series being as follows: in cases of athetosis, 20 per cent, in cases of hemiplegia, six per cent, in cases of paraplegia, three per cent, and in tetraplegia, 17 per cent. These two Danish papers remind us that any intelligent approach to the etiology of cerebral palsy must be based on correlating the type of cerebral palsy with the specific type of obstetric injury.

As neurochemistry advances it is becoming increasingly apparent that a wide range of complex enzymatic aberrations may cause various types of brain injury. As an example of this type of injury to the fetus, let us consider the dramatic observation of Thiersch. Twelve gravid women, all of whom were in the first trimester, and all of whom presented urgent indications for therapeutic abortion, were given suitable oral doses of a potent folic acid antagonist, 4-amino-P.G.A., over a period of two to five days. The action of this agent is to produce a severe folic acid deficiency; and in pregnant rodents this deficiency causes rapid death and absorption of the embryos.

What happened in these 12 pregnant women who were given this folic acid antagonist? In the five earliest pregnancies, immediate death of the fetus occurred, followed by abortion within 17 days after the first course of the drug. In a sixth case, abortion also occurred within 17 days but death of the embryo did not take place until near the time of expulsion; this fetus had a meningocele. In four additional cases, spontaneous abortion ensued but only after a second course of the drug. In only two of the 12 cases did the folic acid antagonist fail to cause abortion. In these two cases surgical intervention was finally employed and in both instances fetal malformations were present, in one, a hydrocephalus, and in the other, a cleft palate with harelip.

These experiments demonstrated clearly the essentiality of folic acid to fetal life and normal development. The same is true of vitamin B₁₂. Thus, experimental animals deficient in vitamin B₁₂ give birth to hydrocephalic young with a high incidence of skeletal malformations (O'Dell et al. *Proc. Soc. Exp. Biol.*, 76:349, 1951; Graenger et al., *J. Nutr.*, 54:33, 1954). In our own Clinic, a study by Dr. Bacon Chow and his associates revealed the following. In a series of pregnant women selected at random the average vitamin B₁₂ levels in mother and fetus were 120 and 358 $\mu\mu$ /ml., respectively. In one of these cases, however, the levels were

extremely low, namely, 40 and 65 $\mu\mu$ /ml., respectively; this baby turned out to be a cretin with classical signs of hypothyroidism and retardation of bone growth (*Am. J. Clin. Nutr.*, 4:440, 1956).

Since both folic acid and vitamin B₁₂ are so intimately associated with hematopoiesis, it may be overlooked that their role in hematopoiesis is simply an easily demonstrable example of their essentiality in the formation of nuclear protein throughout the body. Indeed, vitamin B₁₂ is essential in normal hematopoiesis by virtue of its enzymatic role in nucleic acid and nucleoprotein synthesis, an impairment of which can cause megaloblastic anemia, such as pernicious anemia. Folic acid is also important in correcting specific metabolic defects which result in bone marrow megaloblastosis.

The observations of Thiersch, mentioned above, as well as other evidence, indicate that in the early embryo, nuclear synthesis takes place to a pronounced degree and that a liberal supply of folic acid is essential. Through some miraculous mechanism beyond our ken, the placenta seems to be able to take cognizance of this fetal need and maintains a much higher concentration of this substance in fetal blood than in maternal. The fact that Vitamin C is also much higher in fetal blood than in the maternal is of particular interest in the present condition since it is known that vitamin C deficiency alters normal folic acid metabolism. In addition, folic acid seems to be involved in progesterone metabolism.

The mechanism of action and the interrelationship of these three substances, vitamin B₁₂, folic acid and progesterone, are extremely complex and much remains to be learned about them. Nevertheless, enough has been said to indicate their great importance in the development of the embryo and fetus and to suggest that aberrations in their concentrations might conceivably cause both spontaneous abortion and congenital malformations. This is a fertile field for future research.

Since malformations of the brain are reported in a substantial portion of autopsies in cases of cerebral palsy, any mechanism which can cause malformations of the central nervous system is pertinent to the question at hand. The example cited in which an antimetabolite in the form of a folic acid antagonist produced malformations of the fetus, through disrupting the normal workings of enzyme systems, is just one instance of this type of injury. Thus, riboflavin deficiency and a host of other deficiencies of food essentials, can cause a wide range of malformations in rodent fetuses and the principle involved may conceivably be applicable to the human fetus under unusual circum-

stances. A huge amount of research is currently under way in this field.

Still other circumstances make it plain that a huge wave of interest has recently developed in the etiology of cerebral palsy. Most noteworthy in this respect is the ambitious collaborative program being sponsored by the National Institute of Neurological Diseases and Blindness designed to investigate over a long term period the causative factors involved in cerebral palsy and allied neuropsychiatric disorders. At the present time, some 15 medical schools throughout the country are taking

part in this endeavor and it is hoped that in the course of time some 40,000 pregnancies, meticulously studied, and the same number of infants followed with similar care, will be available for analysis.

Still other undertakings might be cited in this same field but enough has been said to indicate that just over the past five years the etiology of cerebral palsy has suddenly and for the first time received the attention it deserves,—a circumstance which will inevitably be most welcome news to anyone concerned with this grievous disorder.

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The Blood Ammonia In Hepatic Disorders

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INTRODUCTION

WITHIN the past few years the blood ammonia determination has become widely used in the diagnosis and management of hepatic coma. This procedure is considered a routine laboratory test at many large hospitals and is now available at numerous smaller institutions. There is, however, some question about the clinical value of blood ammonia levels in hepatic coma. Some authors report good correlation between the blood ammonia concentration and the severity of impending hepatic coma.¹⁻⁵ Phear and co-workers,² for example, found increased blood ammonia concentrations in 90 per cent of the patients with this syndrome. Other authors, however, have found the blood ammonia level to be unreliable as an index of the severity of this disorder.⁶⁻⁹ Singh and co-workers noted no correlation between the venous ammonia concentration and the clinical state.⁶ Most authors agree, however, that the blood ammonia level is usually increased in hepatic coma, but that fluctuations in its concentration do not always parallel the clinical state.

HEPATIC COMA

The syndrome of hepatic coma may be divided clinically into two phases, the incipient stage which is known as impending hepatic coma or precoma, and the terminal stage or true coma. Impending hepatic coma is a symptom-complex which may occur in patients with liver disease or portal obstruction, characterized by disturbed consciousness, asterixis, and fetor hepaticus, and electroencephalographic changes. The impairment of consciousness ranges from subtle changes in personality to somnolence, apathy, or even complete disorientation, and in the terminal stages, to stupor and deep coma. Asterixis, more commonly known as the flapping tremor, has been regarded as characteristic of this disorder.¹⁰ Other neurologic abnormalities such as dysphasia, ataxia, rigidity, clonus and extensor plantar reflexes are sometimes present.¹¹ The fetor hepaticus, or liver breath, is a sweetish, fruity odor which frequently accompanies this syndrome.¹² The electroencephalographic pattern

shows progressive slowing which appears to correlate moderately well with the severity of the disturbance of consciousness.^{13,14} Some authors believe the appearance of "triphasic waves" in the electroencephalogram is specific for this syndrome.¹⁵

It should be emphasized, however, that the individual components of this syndrome are quite non-specific. The mental changes are indistinguishable from those seen in uremia, carbon dioxide narcosis and a variety of other organic psychoses. Similarly, asterixis may sometimes be seen in chronic pulmonary insufficiency and other metabolic or drug-induced disturbances.¹⁶ The electroencephalographic patterns are probably non-specific, and indistinguishable patterns may be observed in other forms of metabolic coma.^{13,15,17} Although the fetor hepaticus appears to be specific for hepatic coma, it is not always present in this disorder, and its presence is not equally well appreciated by all observers. Nevertheless, the combination of these individually non-specific findings in patients with severe liver disease results in a characteristic syndrome which presents little difficulty in diagnosis.

This syndrome is most commonly precipitated in patients with cirrhosis or portacaval shunts by the administration of nitrogenous substances such as ammonium salts or a high protein diet, or after hemorrhage into the gastrointestinal tract. It may also develop due to acute liver damage as may occur in severe viral hepatitis without being caused by an exogenous nitrogen load. As will be discussed below, a similar clinical picture may accompany a variety of metabolic disturbances.

What is the relationship of this syndrome to the blood ammonia concentration, and why is there disagreement among different authors as to the clinical validity of this determination? Before one can embark on a clinical evaluation of the blood ammonia determination, it is necessary to review ammonia metabolism and the techniques employed in its measurement.

AMMONIA METABOLISM

A brief review of the role of ammonia metabolism may help clarify some of these questions. Ammonia is the key intermediate in the metabolism of nitrogen and must be considered within this frame of reference. It serves both as a source

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of nitrogen for the synthesis of protein and as an end product of the degradation of most nitrogen compounds. Nitrogen gains access to the body by the ingestion of protein and other nitrogen-containing substances, and it is excreted as urea, ammonium ion, and uric acid in the urine. Small amounts of other nitrogenous substances also appear in the urine and stool.

Many organs participate in maintaining the ammonia concentration of the tissues within relatively narrow limits. Although only a few of the reactions involved are clearly understood, a general idea of the over-all metabolism of ammonia has been gained by the measurement of the ammonia in the blood perfusing various sites in the body. Figures 1 and 2 schematically illustrate these relationships in the normal state and in impending hepatic coma.

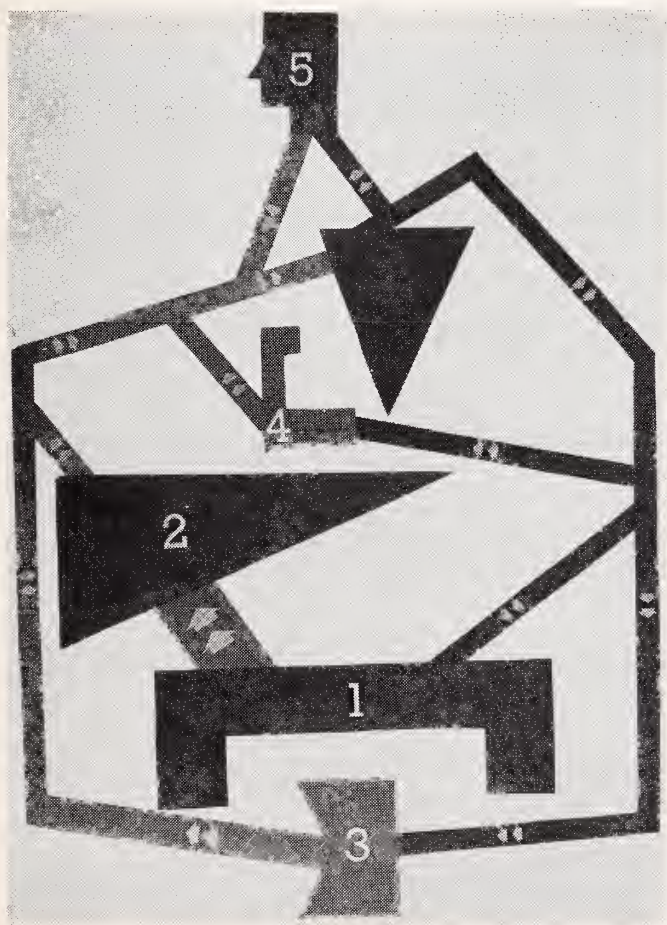


FIGURE 1.

DIAGRAMMATIC REPRESENTATION OF NORMAL BLOOD AMMONIA RELATIONSHIPS

The black lines represent arterial blood vessels, the gray lines venous vessels, and the arrows indicate the direction of flow. The blood ammonia concentration is represented by the width of these lines. No. 1 represents bowel, No. 2 liver, No. 3 the kidneys, No. 4 the extremities and No. 5 the brain. Normally the high ammonia content of the portal vein is reduced in the liver. The kidney adds ammonia to the systemic circulation.

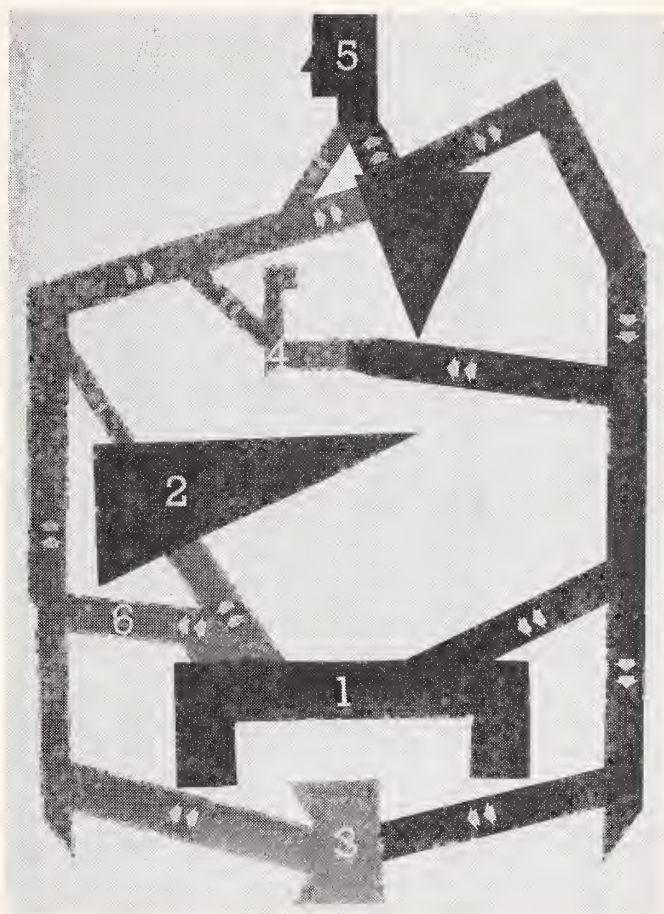


FIGURE 2.

DIAGRAMMATIC REPRESENTATION OF BLOOD AMMONIA RELATIONSHIPS IN CIRRHOSIS WITH IMPENDING HEPATIC COMA

No. 1 represents bowel, No. 2 liver, No. 3 the kidneys, No. 4 the extremities, No. 5 the brain and No. 6 portasystemic anastomoses. Some of the ammonia absorbed from the bowel is shunted into the systemic circulation raising the blood ammonia level. The extremities and brain, as well as the liver, extract ammonia to reduce elevated systemic blood ammonia levels.

The gastrointestinal tract is the major portal of entry of ammonia into the body. The bowel, even in the fasting state, serves as a continuous source of ammonia, presumably due to the bacterial enzymatic hydrolysis of urea which has diffused into the bowel.¹⁸ Superimposed on this constant absorption of ammonia are large increments caused by bacterial deamination of amino acids following the ingestion of dietary protein.^{19,20,21} The absorbed materials are carried by the tributaries of the portal vein to the liver where ammonia, which is toxic in high concentrations, is quickly removed from the circulation. It is stored in the liver as glutamine which serves as a non-toxic storage form of ammonia.²² Subsequently, the liver utilizes the ammonia for the synthesis of proteins or of urea. Although the liver plays the major role in the removal of ammonia from the circulation, it also

gives rise to the ammonia liberated in the deamination of amino acids²³ and the degradation of other nitrogenous compounds. The ammonia concentration of the hepatic vein blood consequently represents the sum of the unextracted portal vein ammonia and the contribution of ammonia by the liver. Measurements of portal and hepatic venous ammonia concentrations suggest that the liver has an enormous capacity for the extraction of ammonia derived from the bowel.^{22, 24, 25, 26} The presence of extensive anastomoses between the portal and the systemic venous systems, as may exist in cirrhosis, enables large quantities of ammonia and other products absorbed from the bowel to by-pass the liver and to achieve toxic levels in the systemic circulation.

The kidney, too, plays multiple roles in the maintenance of ammonia equilibrium. Although it is the primary site of nitrogen excretion and the sole organ which eliminates ammonium ion from the body, it serves also as a portal of entry of ammonia. Renal vein ammonia concentrations are always higher than simultaneous renal arterial levels.²⁷ This nephrogenic increment of ammonia is exaggerated in the presence of metabolic acidosis during which increased quantities of ammonium ion are excreted in the urine. Thus, it appears, somewhat paradoxically, that the greater the urinary ammonium excretion, the greater is the renal contribution of ammonia to the blood. These findings suggest that a certain fraction of the amount of ammonia liberated by the kidney for excretion "leaks" into the renal venous blood.

Under normal conditions, the peripheral tissues appear to play a minor role in the ammonia balance. Measurements of arterial and venous ammonia concentrations in the resting state have revealed that there is equilibrium or a small uptake of ammonia by the peripheral tissues of the extremities^{28, 29, 30} During muscular activity, however, ammonia is liberated in large quantities.^{31, 32, 33} Presumably, there exists an equilibrium between the excessive release of ammonia following exercise and the small uptake during rest. In the face of rising blood ammonia levels, the extraction of ammonia by the extremities assumes major proportions, and as much as 40 per cent of the arterial ammonia concentration may be removed.^{28, 29} When the capacity of the peripheral tissues to remove ammonia is exceeded, there results an increase in the systemic blood ammonia concentration and the appearance of the signs of ammonia toxicity.³⁴ Brain tissue also appears to absorb ammonia from the blood, although to a lesser degree than the extremities.^{30, 35} In the terminal stages of hepatic coma, the extremities and brain sometimes actually release ammonia into the venous blood.^{30, 35} So far

as is known at present, no other organs are important in the maintenance of ammonia equilibrium.

THE BLOOD AMMONIA DETERMINATION

The majority of the blood ammonia values reported in the literature have been performed by the Conway technique or by minor modifications of it.³⁷ This method, which was described in 1935, depends on the liberation of ammonia by the alkalization of blood. The ammonia diffuses into an acid solution where it is quantitated by titration. The ammonia measured by this technique probably arises from both preformed ammonia and from the hydrolysis of amide or amino nitrogen in the blood.^{38, 39}

Seligson and Hirahara have recently devised another ammonia diffusion method which, by more gentle alkalization, avoids the hydrolysis of ammoniagenic components of the blood.³⁹ These authors believe that this method measures the preformed or "true" ammonia content of the blood. It should be pointed out that at pH 7.4 the ammonia exists almost entirely as ammonium ion. However, by common usage the term blood ammonia is employed to indicate the total ammonia-ammonium content of the blood.

Most of the blood ammonia levels reported in the medical literature have been determined on venous blood. It has been shown, however, that simultaneous arterial and venous ammonia levels may differ considerably due to the extraction of ammonia by the peripheral tissues.^{30, 35} The arterial levels appear to correlate more closely with the clinical state than do the venous ammonia levels.^{30, 35, 40} Other authors have suggested that the partial pressure of arterial ammonia, which can be calculated from determinations of the arterial ammonia and hydrogen ion concentration reflects, even more accurately, the degree of cerebral impairment.⁴¹ Further studies have shown that the ammonia content of the cerebrospinal fluid may be superior to blood levels as an index of the severity of the disease process.^{40, 42} Recently Warren and Nathan have shown in animals that during alkalosis the blood-brain barrier is far more permeable to ammonia, and that greater central nervous system toxicity ensues.⁴³

These findings have suggested that the degree of impending hepatic coma may be directly or indirectly related to the intracellular concentration of ammonia in the central nervous system. Assuming this hypothesis to be correct, it is evident that the measurement of the ammonia content of the peripheral venous or arterial blood, or of cerebrospinal fluid, is, at best, an indirect and probably unreliable index of the intracellular ammonia concentration. Unfortunately, the performance of serial arterial or lumbar punctures renders these deter-

minations too cumbersome for routine clinical usage. It should be emphasized, however, that in the great majority of patients in pre-coma the venous ammonia is elevated and serves as a rough index of clinical severity.

RELATION OF HEPATIC COMA TO BLOOD AMMONIA LEVELS

The prime evidence that ammonia is the cause of hepatic coma is the fact that the administration of ammonium salts or ammoniagenic compounds can precipitate the syndrome of hepatic coma in man, and can induce a similar disorder in experimental animals. Phillips,^{44,45} Traeger,⁷ and McDermott⁴⁶ and their co-workers have demonstrated clearly the dangers of ammonium salts, ammonium cation exchange resins, urea, and high protein diets in patients with cirrhosis or portacaval anastomoses. An analogous situation, known as meat intoxication, has been recognized in animals with Eck fistulae for many years.^{47,48} Similar studies have shown that the development of impending hepatic coma in cirrhotic patients after hemorrhage into the gastrointestinal tract involves this same mechanism.^{49,50,51} Recently the intravenous administration of ammonium chloride in patients without hepatic disease has been shown to cause the picture of impending hepatic coma.^{5,52,53} This syndrome can also be duplicated in normal animals.^{9,23,34,54} This clinical picture may be induced by the intravenous administration of urea,⁵⁵ urease,⁵⁶ or glycine.^{23,57} In each of these situations ammonia is liberated from the material administered and, presumably, is responsible for the clinical picture. Other substances such as methionine,^{19,58} acetazolamide (Diamox®)^{59,60} and chlorothiazide (Diuril®)^{61,62} can also induce this syndrome in cirrhotic patients, although the pathogenesis is less clearly understood with these compounds.

Bessman³⁵ has suggested that increased ammonia is directly responsible for hepatic encephalopathy by combining with, and thereby reducing the concentration of, α -ketoglutaric acid, one of the essential components of the Krebs' cycle. This hypothesis, which is compatible with the known facts of this disorder, has received support from the studies of Clark and Eiseman.⁶³ The demonstration that oxidative metabolism of the brain is depressed in hepatic coma^{64,65} supports this theory.

Further support for the etiologic role of ammonia in hepatic coma is gained from the recovery of patients with nitrogen-induced portal encephalopathy following therapy designed to decrease nitrogen absorption. Such therapy consists primarily of stopping the administration of the offending medication, or the high protein diet, or promptly controlling the bleeding site if hemor-

rhage is responsible. In addition, the oral administration of antibiotics such as neomycin minimizes the absorption of ammonia arising from the bowel by the suppression of intestinal bacteria. These antibiotics reduce the portal vein ammonia arising from protein, blood, urea, and other substances in the gastrointestinal tract.^{19,21,60,66,67} The removal of residual nitrogenous material from the gastrointestinal tract can be accomplished by the liberal use of cathartics and enemas.⁶⁸ Changes in the blood ammonia concentration may precede alterations in the clinical state by many hours. The failure of the blood ammonia level to return to normal on such a regimen indicates renewed efforts must be made to control gastrointestinal hemorrhage and suggests the use of arginine and/or glutamic acid.

The clinical improvement which sometimes follows the administration of arginine⁵ is attributed to the reduction of ammonia levels by the increased formation of urea. Arginine was introduced as therapy for hepatic coma on the basis that it appeared to enhance the synthesis of urea from ammonia, converting a toxic material to a non-toxic, excretable substance. Indeed, arginine has been shown to protect animals from the toxic effects of ammonium compounds and to increase urea production.⁶⁹ Clinically, however, this material appears to be most valuable in the treatment of hepatic coma caused by excessive nitrogenous intake, and to be of limited value in those cases caused by primary hepatocellular failure.⁷⁰⁻⁷¹ The use of glutamic acid to reduce the blood ammonia concentration was based on the postulate that ammonia was utilized in the synthesis of glutamine from glutamic acid and ammonia.⁷² This form of therapy has been disappointing, although it is capable of transiently lowering blood ammonia levels.⁷³

There is no doubt that the syndrome which we recognize as impending hepatic coma can be induced in patients with hepatic disease, and occasionally in patients without disease of the liver, by the administration of ammonium salts. Furthermore, it is probable that ammonia is the etiologic agent in cirrhotic patients in whom urea or ammonia-liberating exchange resins have precipitated this syndrome. Similarly, it appears likely that portal systemic encephalopathy induced by high protein diet or gastrointestinal bleeding in cirrhosis is brought about in an analogous manner, although other mechanisms may be involved.

The assumption that ammonia per se is responsible for this disorder in some situations in no way implies that all patients with hepatic coma are ammonia-intoxicated. It is apparent that in patients with severe liver disease, mechanisms other than ammonia toxicity may give rise to this syndrome. The use of narcotics, for example, may

precipitate a very similar clinical state. "Hepatic coma" may follow paracenteses,^{5,74,75} apparently related to sudden rigorous disturbances in water and electrolyte balance.⁷⁶ It is unlikely that the precipitation of pre-coma by infection, surgery, sedation, mercurial diuretics, and chanal trauma are all mediated by a single mechanism.^{32,50,74} In addition, hypokalemia^{61,77} and hypoglycemia⁷⁸ have been implicated as possible factors in the pathogenesis of some cases of hepatic coma.

The fact that some patients with impending hepatic coma do not have increased levels of blood ammonia is one of the strongest arguments against ammonia as the etiologic agent responsible for hepatic coma. Several explanations exist to explain this phenomenon. First of all, most investigators have utilized peripheral venous blood ammonia levels which may be significantly lower than arterial or jugular venous concentrations. Secondly, changes in blood ammonia concentration do not exactly coincide with the neuro-psychiatric symptoms, but may precede by many hours neurologic improvement or deterioration.^{34,42,79,80,81} Thirdly, the intricate and interrelated mechanisms by which the body attempts to correct these abnormalities of ammonia metabolism may be complicated by alterations in acid-base equilibrium, the concomitant presence of other disease processes, and the use of a variety of medications which may make the prediction of the blood ammonia concentration almost impossible. Finally, it appears reasonable to assume that a variety of metabolic disorders in patients with severe liver disease may impair cerebral metabolism sufficiently to produce mental deterioration accompanied by abnormal neurologic phenomena and electroencephalographic changes. Diffuse slowing of the electroencephalographic pattern which accompanies a wide variety of toxic and metabolic disorders of consciousness represents changes in the functional integrity of the brain.^{13,14,15,82,83,84} Among these disturbances, uremia and hepatic coma have been shown to be associated with decreased cerebral oxygen consumption.^{64,65} Similarly the flapping tremor may occur in the same or similar metabolic toxic disturbances.¹⁶ Although ammonia toxicity is probably the most common of these disorders, it must be assumed that an indistinguishable picture may be induced by other abnormalities such as uremia, chronic pulmonary disease, congestive heart failure, magnesium deficiency, hypokalemia, hypoglycemia or bromism in the absence of elevated blood ammonia concentrations.

It is even possible that an entirely unrecognized substance may be responsible for hepatic coma in those patients in whom blood ammonia levels are

elevated. It has been postulated that substances such as indole derivatives⁸⁵ or amines⁸⁶ derived from the gastrointestinal contents might be responsible for this syndrome. Other metabolic abnormalities have led to the suggestion that disturbances in sulfur metabolism may be implicated in the pathogenesis of this disorder.⁸⁷ Although the etiologic agent of hepatic coma is unknown, there is no substance which appears to satisfy all of the known observations so well as ammonia.

OTHER CLINICAL USES OF THE BLOOD AMMONIA

The blood ammonia determination has been reported to serve several other functions in addition to its use as an index of hepatic coma. The ammonia tolerance test was first described by van Coulaert and co-workers in 1932.⁸⁸ These authors showed that ammonia tolerance was normal in obstructive jaundice and hepatitis but impaired in cirrhosis, and postulated that the abnormal tolerance was related to the portal systemic anastomoses rather than to parenchymal dysfunction per se. These findings have been confirmed in general^{89,90} although abnormal ammonia tolerance in hepatitis has been observed.^{91,92} Based on these studies the ammonia tolerance test has been employed successfully to determine the patency of surgical portacaval shunts.⁹³

In gastrointestinal hemorrhage the blood ammonia has been reported to help localize the bleeding site by determining the presence or absence of cirrhosis.^{50,51} The rationale for this conclusion is that blood, like other nitrogenous substances in the alimentary tract, undergoes bacterial enzymatic degradation during which ammonia is liberated. In the cirrhotic patient this may lead to increased peripheral ammonia levels due to the shunting of ammonia-rich blood through portasystemic collateral veins. This test is incapable of differentiating bleeding from esophageal varices from other sites in the gastrointestinal tract in the cirrhotic patient.⁵¹

Aside from the clinical situations described the blood ammonia is of limited value. It has been shown that the blood ammonia may be increased in congestive heart failure,^{94,95} in shock^{25,26} and after muscular exercise.^{31,32,33} In addition, patients with ureterosigmoid transplantation have developed hepatic coma in the course of intercurrent hepatic disease.^{96,97}

The development by McDermott⁵⁰ of a simple, rapid screening method for estimating blood ammonia concentrations is a valuable contribution. This method, which is a modification of the Conway technique, is now commercially available, and may be of clinical value for the small hospital.

SUMMARY

Although the venous blood ammonia concentration does not closely parallel the clinical severity of impending hepatic coma, it does serve as a helpful laboratory tool. The blood ammonia is usually abnormally elevated in those patients in whom this syndrome is precipitated by the increased absorption of nitrogenous compounds. A variety of other metabolic disturbances may give rise to a similar clinical picture which is not accompanied by increased blood ammonia concentrations. In appropriate patients serial blood ammonia determinations may offer valuable diagnostic and prognostic information.

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Schizophrenia: A Major Public Health Problem

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THE purpose of this report is to focus attention upon schizophrenia, not only as a psychiatric entity, but as one of the major public health problems of our time.

In the past 50 years Medicine has undergone a philosophical evolution almost as important as its therapeutic evolution. I am referring especially to a greater frankness and sophistication about the nature and recognition of disease.

Before the turn of the century, the great scourges of mankind were seldom designated by name outside of scientific circles, because they were too harsh for the ear, too embarrassing for the mind. Terms like cancer, tuberculosis, syphilis, were not mentioned in polite society. Instead, those afflicted were said to be suffering from "lingering illness," "wasting sickness," "social disease."

This conspiracy of silence has been lifted within our own lifetime by the creation of the great research funds, such as cancer, heart disease, tuberculosis, polio, etc., that dared to name the culprits and to arouse public awareness and support in the effort to stamp them out.

Is it not time that this sensible development in physical illness should begin to manifest itself in mental illness as well? We still talk about "mental health" when we mean "mental illness," and we ask the public to support drives for mental *health* when what we are really after are funds for mental *illness*. This conceptual euphoria seems to pervade all levels of society: lay, professional and even federal. Thus, in Bethesda, Md., we have such eminent governmental organizations as the National Institutes for cancer, for allergy and infectious diseases, for arthritis and metabolic diseases, for neurological diseases and blindness—all hard-hitting designations that call a spade a spade and have specific meaning. But, the institute that is concerned with mental sickness still euphemistically calls itself "The National Institute of Mental Health."

If our primary concern is the eradication of mental illness, why not be forthright in saying so; or, better still, why not focus specific attention upon some of its major culprits? In a letter in the *American Journal of Psychiatry* a year ago,¹ I suggested that schizophrenia in particular ought to be singled out for much greater public and even professional

scrutiny than it has previously received, for it is the largest and most important segment of all mental illness, and may, as many believe, provide the key to most diseases of the mind.

Undoubtedly, schizophrenia is one of the most tragic afflictions of mankind, not only in cost and human misery, but also in our relative ignorance of its cause and cure. Unlike such other wreckers as cancer and heart disease, which usually attack their victims after the prime of life and often result in merciful death, schizophrenia seeks its prey among young men and women on the threshold of maturity and may condemn them to life-long isolation from the world about them. In an article on schizophrenia in *The Saturday Evening Post* in 1955,² Dr. George E. Stevenson, Medical Director of the National Association for Mental Health, was quoted as saying, "No mountain towers over other mountains as schizophrenia towers over the better-known ailments—Its peculiar ability is to wreck the lives of the able-bodied—It likes its victims young, and often robs them of 20 or 30 years which would have been their most productive."

A gifted young patient of mine once wrote a poem before the night closed in, that could well serve as an epitaph to all schizophrenics and as a challenge to all of us:

SCHIZOPHRENIA

There was a time when music flowed
Like a dark volcanic wine
Through the cool and caverny recesses
And crypts of my gloomy soul—
Then over earth and over sky
A distant thunder rolled,
And finned thoughts flashed through that stream—
Weird fish that darted blind—
And in the cavern of my soul
An awful night held sway,
The entrance blocked by giant pines
With all their roots upturned—
None but the hand of God could roll
Those monstrous trunks away—
None but the hand of God could still
The terror yet unborn.

* * * *

It is well to repeat that schizophrenia represents a greater threat to potentially productive young

people than any other disease, mental or physical. It may well be called the mental crippler of youth.³

From a public health point of view, schizophrenia ranks in importance with cancer, heart disease, and other devastating diseases. The public ought to be more squarely confronted with it, and that goal can best be achieved by a national foundation for research in schizophrenia, similar to the cancer fund, heart fund, polio foundation and others.

Until now, public support has been directed toward the omnibus concept of mental health. But, psychiatry has long outgrown such generalizations. We must keep step with the times by realizing that only by *specific* appeals to public conscience and public security can maximum support be inspired.

The basic reason is obvious. Identification is a necessary psychological prelude to participation. And, it is easier for an individual to identify with a particular disease—cancer, heart disease, schizophrenia, for example—that has been publicly emphasized, that he has observed in others, and that he fears in himself, than to identify with such ambiguous generalizations as "Physical Health" or "Mental Health."

1. *Schizophrenia is one of the most prevalent of all major diseases.* More than half the total number of mental hospital beds in this country are occupied by the 750,000 schizophrenic patients in our mental hospitals—a number greater than that for polio, cancer, heart disease, tuberculosis, and all other diseases combined. Of the 250,000 new mental cases each year, 24 per cent or 60,000 are schizophrenics. But, because of their relative youth and because of the chronicity of the disorder, coupled with a relatively low death rate, these patients tend to accumulate from year to year, eventually making up the bulk (about 60 per cent) of the mental patient population.

As a result, about 400,000 schizophrenics are to be found in our mental hospitals at any one time. *This means that one out of every four mental hospital beds in this country is occupied by a schizophrenic*—a frightful record that no other sickness can match! But, that isn't all. There are untold numbers of borderline cases living out their lives in a twilight zone, not quite sick enough to be in an asylum, not quite well enough to live in society, a poignant heartache to their families because they seem within reach, but cannot be reached.

2. *Schizophrenia is one of the costliest of all major diseases.* The 400,000 hospitalized patients, about half of whom are of wage-earner age, represent a loss of one billion dollars a year in potential earning power; a loss of \$200,000,000 a year in federal taxes; a loss of \$350,000,000 a year to our taxpayers for custodial care and treatment, together with another \$1,500,000 yearly for building and

maintenance. If we include the cost of treatment and work loss of our non-hospitalized cases, the total loss to our national economy amounts to about two billion dollars yearly! Think of the enormous dividends that a small fraction of that amount invested in research would eventually yield!

3. *Schizophrenia is the most neglected of all major diseases.* In our world of progress it is hard to realize how recent has been any wide-spread interest in mental illness by the public and the government. The first big gun was fired in 1954 when a Congressional committee headed by Rep. Charles A. Wolverton of New Jersey, declared, "There is probably no more serious problem in the health field today than that of mental illness."

If that is true of mental illness at large, it must, by extension, be even more true of schizophrenia, the most important mental illness of all. It is only three years ago, in 1955, that a Joint Commission on Mental Illness and Health was established under Congressional mandate. In 1956 and 1957, several million dollars had been allotted by Congress for research in mental health, a tremendous incentive to research and to Psychiatry in general, but as yet no specific funds had been earmarked for schizophrenia, greatest trouble-spot of all! Here is a vast frontier of society and medicine that has scarcely been explored. Less money has been spent on research in schizophrenia than on any other major disease of our time. Until recent years, less than \$100,000 a year was available for research purposes, and most of that was donated by the Masonic Scottish Rite, a stalwart pioneer in that field, through the National Association of Mental Health and under the able direction of Dr. William Malamud. At present, much more than that is being spent, but the precise sum is impossible to determine, because as yet, there is no central clearing house for statistical information despite the urgent need for such an agency. Dr. Robert H. Felix, director of the National Institute for Mental Health, estimates that several million dollars have very recently been disbursed, chiefly through federal and state grants. But the amount is still pitifully inadequate when compared with the whopping \$30 million fund for heart disease, \$45 million for cancer, \$50 million for polio! (To say nothing of the \$300 million a year that the American public spends for chewing gum, \$9 million for dog and pet medicine).

* * * *

On March 25, 1958, the House Subcommittee on Health Education and Welfare, suiting its action to its word, allocated \$1,300,000 specifically for research in schizophrenia, thus setting an historic precedent, both for Congress and for American psychiatry that may one day emerge as a landmark in the annals of schizophrenia.^{4, 5, 6, 7}

Thus, at long last, schizophrenia has been extricated from the relative anonymity of "Mental Illness," and given autonomous status and emphasis in the public mind.

What results can be expected? There is ample reason to believe that successful prevention and treatment will eventually be discovered for the great wrecker, Schizophrenia. Already, within our lifetime, this once near-hopeless disease has yielded ground before the onslaught of psychotherapy, shock treatment and the tranquilizing drugs. Before World War I less than 20 per cent of all schizophrenics who were admitted to mental hospitals could be expected to come out alive. Today, despite the meager research facilities available, 60 per cent will return from the living dead. New hope and in-

spiration pervade the psychiatric atmosphere. With greater cooperation between public, professional, and federal organizations, this hope may yet become a reality.

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Nutrition, Atherosclerosis, And Infarction

In various ways nutrition is probably a factor in causing atherosclerosis, "but it should be emphasized frequently that no discussion of nutrition and heart disease should be interpreted to mean that nutrition is the sole or perhaps even the major cause," says Dr. Frederick J. Stare.

Experiments have shown that the addition of 1 mg. of cholesterol per 3 to 5 calories of food consumed in a diet will cause significant hypercholesteremia and ensuing atherosclerosis. However, serum cholesterol and atherosclerosis are influenced not only by dietary fat but also by the amount of dietary protein, carbohydrates, and magnesium and the addition of several uracil and pyrimidine compounds.

Under the conditions set by certain studies, it has been shown that "fats rich in the polyunsaturated fatty acid linoleic acid . . . effect a decrease in serum cholesterol of the order of 10 to 30 per cent, depending on the initial level." These results were based on formula diets, "not on the addition of these oils to a 'meat and potato' diet."

Evidence is increasing that mounting cholesterol levels also favor the development of infarction.

In any case, atherosclerosis should be considered a disease of "multiple and additive etiology," also involving heredity, overweight, and hypertension. Although nutrition may not even be the major cause of atherosclerosis, it is involved in the disease. There is no complete understanding of how nutrition is involved, but, when this is understood, the promise of prevention will be fulfilled by evolving the necessary dietary changes. (*American Journal of Clinical Nutrition* 7:3, January-February, 1959.)

The Saddle-Bag Viewpoint

PAUL HOLLISTER*

New York

THE surge of the frontier was on. In a year or so, the western vote would heave John Quincy Adams from the White House in favor of a frontier roughneck called Andrew Jackson. Adams would go home to Quincy, then calmly back to the House of Representatives for a 17-year stretch when our migrating family landed at Detroit on the tenth of May in 1827. It was a town of four hundred, most of them Indians and French. Our hero was then three years old.

The family then made its way to a forest settlement of seven families called Indian Village, some forty miles north of Detroit. The head of the house—a war-veteran who had been clipped in the head by a British sabre in the Battle of Lundy's Lane—jumped into the middle of the muscular activity that built the new community. First there was the schoolhouse, which also served as an all-sectarian house of worship for the saddle-bag circuit riders. Land in these parts ran about \$1.25 an acre. Every boy's ambition was to own and farm his own 80-acres. The first homestead need was a loghouse shelter; the next, a barn for the stock. The day's work was, prophetically, one which ignored the clock. The boys hired out at \$10 to \$13 a month; the girls hired out at \$26 to \$52 a year. The kids caught the dickens if they didn't go to school or church.

Our boy, at six, had memorized the first three chapters of Matthew for Sunday School. For some years he earned \$3 a month by sweeping the church and ringing the bell. When he was eleven, an educated Williams man strayed into the settlement, founded an "academy," boarded with this same family, and poured on the instruction. The result was that our boy at 15 was eager to go 'back East' to school, and he went to the metropolis of Jordan, New York. There he graduated with highest honors.

"The spring was at hand," he said, "and I could ride on an Erie canal boat at a penny a mile and board," (about 50 cents' worth). That is how he rode from Cato to Rochester, New York, where he found an uncle, who said if he'd come back in the autumn, he might live with uncle and get a year's tuition in the Rochester Collegiate Institute. He

came back. A fellow named Horace Mann had recently pressured the state legislature into creating several departments through the state for training teachers; Rochester had one, and here this persistent little "wild and woolly boy of the West" enrolled, and for 33 weeks never missed a class. Near the end of the year his uncle finagled his return for another year, and at 17 he was duly graduated, and he was accredited to teach school anywhere in York State, and (as he ironically wrote later) "my school days were ended."

Once back home in Romeo, Michigan, (that was the fancy new name of Indian Village) he had to get to work fast to keep his mother from starving. He bit off a dual job: house-choreman and school teacher at a country-district school not too far out of reach.

He rose Monday at five, and bucksawed enough firewood for two weeks.

At 6:30 his mother had a stout breakfast ready.

At 7:00 a.m. he took off for the eight-mile walk to his school, and when the snow would slow his speed he would trot. From nine to 12 he taught school. At noon he ate a cold lunch with the students in his class. During the week he "boarded round," and when school closed at three or so he would walk a mile or two to the house of his current host. He did his teaching standing up so his feet got plenty of work. Nineteen of his pupils were older than himself, and most of them were interrelated to form a genial gang. Cued by a jolly youth of 20 who performed a tap-dance in the middle aisle of the one-room school-house when the lad had come in late on a snowy morning, our young teacher slammed him into his seat, and discipline became no problem. One of the little boys whispered: "He'd kill us, wouldn't he?"

Meanwhile the Romeo family doctor was getting in some proselyting. He persuaded the young teacher that by reading in his medical library out of school hours, the youth might prepare for entrance to a medical school.

"I reasoned thus," our character said later. "I wasn't good enough to be a preacher, nor pugnacious enough to be a lawyer. I had not means to set myself up in business, nor money enough to buy a farm. The question narrowed itself down to this: shall I be a pedagogue, or a doctor? He cast the die.

For three years he taught district school to save enough money to pay for a summer of tuition at

* Mr. Hollister is author of the forthcoming biography of the late Professor Charles Townsend Copeland, entitled: "First Reader: Copeland of Harvard". His talk, here edited by Dr. Mark A. Hayes of New Haven, was made at the annual meeting of the New England Surgical Society at Poland Spring House, Poland Spring, Maine, September 26, 1958.

Berkshire Medical College in Pittsfield, Massachusetts, a summer's course from August 1 to November 15, roughly 14 weeks. At 21 years of age he spent the summer reading medicine in the metropolis of Riga, New York, with a Dr. John Smith, where he also "pulverized Spanish flies, compounded pills, made up mixtures, kept the doctor's saddle-bags well supplied and rode with him, and at the bedside of patients looked the wisest I knew how."

In his spare time he sneaked into the harvest field and cradled wheat at a dollar and a half a day and earned \$27. This he spent immediately on a fine dress coat, in which he was later to be graduated, and married.

This fellow was no superman. He was a sturdy blond, about 5' 8" or 5' 9", though by the time I knew him he sported a frock coat, white waistcoat, and crest of white hair. His color was a fine pink, all the way to the undertaker, whom he met only in his very late eighty's. Since we left him back on the threshold of medicine, let's rejoin him.

All through school, money haunted him: *how* to pay the second term, *how* to pay board, *how* to earn enough to send money home to Romeo. He gave his mother \$20 the first winter, \$30 the second. The young man's receipts for teaching district school these winters between his medical study were \$16 the first winter, the second \$20. The Good Uncle in Rochester saw him through with loan-money and on November 7, 1847 he graduated at Pittsfield.

"The day I passed the 'green room' I spent at Hinsdale with a party of young people whom I took on a ramble for berries through fields and woodland. There was not a 10-rail fence in sight over which I could not leap without a trip, especially as I was one of three to read my thesis in public. Does any doctor ever forget the day when he passed the 'green room'?"**

Lake Erie is now frozen. The young man goes back to teaching school. After school has closed in the spring of '48, there were two weeks before the ice would go out of the lake, so he hired-on to a handy cousin, felled trees for rail timber, earned six dollars (50¢ per day) and at once squandered it on two volumes of *Miller's Principle and Practice of Surgery*. This treasure he took on board the steamship *Oregon* at Buffalo, April 18, 1848.

The ship caught fire, was barely saved at Cleveland, limped on to Detroit. The non-prodigal, with his water-logged books, lit out for Romeo to say hello to Mary, his mother. Next day he rode to Pontiac to see Jeannette, his best girl. Then he rented a strong saddle horse, and set out across the state to find a medical practice.

"There seemed in each (county site) a surplus of doctors of all sorts, sizes, and creeds," until at last in Ionia County, north-by-west of Lansing, at a cross-roads called Otisco, he found a young doctor who said he wanted to complete *his* medical-schooling, so our neophyte contracted to stand in for him.

Back to Pontiac he galloped to tell Jenny. He then went to Romeo and turned in the hired horse. He "procured a splendid riding beast, as balky as she was good," on a promissory note for \$30, due in two years." He had an ingenious harness-maker rig him up "an extra-nice pair of saddle-bags" (to be filled by brother Harvey, a drug clerk in Pontiac, doubtless without charge, certainly at sub-wholesale price, from the apothecary's stock). Our boy—his name was John Hamilcar—thereupon lit out for Otisco, and his own practice.

On May 16, 1848 he made his first professional visit.

"My patient was a muscular 10-year-old boy who was supposed to be poisoned by eating a noxious weed. I held him down by main force and gave him a double dose of ipecac. I had been in town only two weeks when I was waited upon by a Committee of farmers and was requested to prepare and read a series of toasts at a general celebration on the fourth of July just at hand, which I did, the exercises being held in a barn. I felt quite set up on that occasion when I heard that boy's father say to a neighbor: '*That doctor saved my boy's life.*' It was the prelude to other calls, and the crisis was passed."

The larger crisis was not passed:

That was the summer when the dams of the new sawmills had backed up and flooded the virgin land and "malarial exhalations" were breeding disease. This was long before (he wrote later) "Laveran of Italy discovered that *Plasmodium malariae* was the cause of all this trouble and that quinine would kill the invader. I then knew only that quinine would cure ague, but I was entirely ignorant of the why."

Now because our boy is so much more eloquent than any paraphrase can be, I want to read you a page or two from his story:

"Nearly all of the diseases which I was first called upon to treat yielded so promptly that my reputation as a young practitioner fresh from the schools grew in favor as rapidly as I could have desired, and I myself began to harbor the impression that I was quite a remarkable physician and could cure nearly everybody that came within my reach. But when the winter came and when one and another of my patients dropped away with acute pneumonia, and a severe epidemic of brain fever, as it was then called, invaded our settlement and suddenly took from us a number of

** The speaker at Poland here asked the doctors present what "green room" meant. None identified it, nor had the speaker. Henry Mencken would have known.

our most prominent citizens, both old and young, I was not long in coming down from my high perch and began to doubt whether I could cure anybody. Dr. Day was now in Cleveland attending medical lectures, and I had the field all to myself, save as I could summon counsel from Ionia, seventeen miles distant. Still, keeping my counsel well to myself, I was able to hold my footing, and much to my surprise the people had more confidence in me than I had in myself. I surely served them as best I knew, and was grateful for their fidelity. I have been engaged in medical practice for sixty years since then, and during that period have treated many thousands of patients, but never since have I been so elated as during that first summer, nor so distrustful of myself as during that first winter. I flatter myself in looking back over this long period that a vast number of my patients were returned to health through my agency. Just how many recovered in spite of it I have never been able to determine. I have this to say in passing, that the young physician in the city who can at once summon the aid of an able consultant, and with him divide the responsibility in the treatment of critical cases, knows nothing of the trying ordeal which confronts the country doctor. But such experiences are not without their compensations. Thrown back upon his own resources he develops a sturdy self-reliance which could be acquired in no other way, and many a suggestion which has been a help to me through life came from the lips of a rough and rugged country doctor.

"Who but cherishes a tender regard for Dr. Ephraim McDowell, who in that little hamlet of Danville, Kentucky, single-handed and alone, performed the first ovariectomy of which there is any record in the annals of surgery; or who, like Sims, fought his way from the rounds of a country practice to one of the foremost positions in the world as a gynecologist? It was Jenner, a country doctor, who gave us the boon of vaccine. It was Williams, who from being a country doctor, became the foremost pathologist of his time in England. And so the list could be extended almost indefinitely of those who came to eminence from places of comparative obscurity. Not a word of disparagement for those who have every advantage for clinical instruction and the command of able consultants. But the real fibre of the man is surely found in the country doctor.

"During the first year I had quite an extended obstetrical practice, and some cases that put my mettle to the test, but I since think that I was then wise in not being over-officious, as the outcome was satisfactory.

"A country physician 20 miles away from home in the selection of remedies is limited to the con-

tents of his saddle-bags, and a doctor called from such a distance is expected to do something. I had thus been called, and of course I must do. The case was that of a little boy who had been bitten by a venomous snake. In all that region whiskey was a popular remedy for snake bites, and of course I prescribed whiskey. The old fellows gathered from the entire neighborhood, and those who were familiar with that article heartily endorsed my prescription and agreed that the young doctor was up to date on snakes. But it occurred to me that something more must be done, since I had come twenty miles, and the neighbors could have prescribed whiskey without any help from me. So I ransacked my brain to select from my saddle-bags something a little above their comprehension. It was purely a matter of accident that I hit upon a bottle containing aqua ammonia and sweet oil. Its repeated application would give the people something to do, and the fumes of the ammonia would convince them that it was something 'mighty powerful.' That snake bite gave me the business of that neighborhood. But the real point is this: the *London Lancet* some 30 years later quoted at length an article from an East India journal stating that in the treatment of snake bites, the external application of the spirits of ammonia had proved to be one of the most serviceable remedies. I had prescribed better than I knew.

"Sixty years have elapsed since that time. I have passed through many and varied experiences in a city which numbered 60,000 when I came to it and now contains over 2,000,000 inhabitants. I have been familiar with all phases of city practice, with hospitals and medical teachings, and all these experiences are pleasant memories; but in all this time I have never forgotten my crude and sometimes amusing experiences during my first year's practice as a country doctor."

If it were not for my deep superstitious belief in the essential force of continuity, I should leave our old doctor here among his quaint primitive problems. But I cannot. For what happened to him has happened to most of you in some degree. At 33 he was appointed demonstrator of anatomy at Rush, and that was when, to demonstrate, you first had to get out and forage for the object to demonstrate. One night our boy did it alone, he says, in a graveyard, and the task gave him a real hard time.

Two years later he is a professor of descriptive anatomy at another college. At 38, he takes the chair of *Materia Medica*. At 40 he takes the chair of Physiology and Public Hygiene. At 42 he boldly asks for, and gets, the chair of Pathology and Public Hygiene at Chicago Medical College, and he sits solidly in it, teaching for 17 years. He was on

Mercy's staff for 34 years, and at 85 he was still signing diplomas at Northwestern.

But back in 1912 he feels very old and lonely. He looks back:

"I was a candidate for graduation when Dr. Warren of Boston first used ether as an anesthetic. In my early days it was deemed a fatal deed to explore the abdominal cavity. Cleanliness was enjoined, but the whole list of antiseptics was unknown; and it was far along in the course of my teaching before the microbe was discovered. . . . With most of us it requires the consumption of midnight oil lest we become back numbers."

At 88 now Hamilcar was beginning to worry about his obsolescence. . . .

Yet when he was 47 he had gone through the Chicago fire and lost most of his books and papers.

When he was 31 and alone in Chicago he would dine near enough the lawyers' table at the Matteson House to eavesdrop the "gentleness" (of speech) and the "stories that would convulse the crowd" of a dry downstate lawyer named Abraham Lincoln.

Our boy even took time off to attend a Douglas-Lincoln debate. Later he shook hands with the President at the White House. And then he bade farewell to Mr. Lincoln, in his box, under the dome of the Court House in Chicago on his way home to Springfield.

At 82 this saddle-bagger ran head-on into the San Francisco earthquake and fire and spent a cool complacent night under the stars in Golden Gate Park with Jenny. His maternal grandfather was from Colchester, Connecticut. His paternal grandfather of Tyringham, Massachusetts, had marched with Benedict Arnold up along these nearby State-of-Maine paths to Quebec. This fellow was simply an incurable Yankee who never knew what would come up next but who tried to figure out how to have his saddle-bags, and his cranky mare, and his wits, in readiness for a smart gallop, and a double-shot of ipecac.

* * * *

II

In 1875 there was another youngster working in an oatfield on Russell's farm a few miles out of Oconomowoc, Wisconsin. The sun was merciless and the stalks were so slippery you couldn't bunch them to tie them, and he was glad enough to stop when he saw, way down the road, the dust of a vehicle.

This rig was known to the whole countryside. Dr. Daniel McLaren Miller was the best doctor in Oconomowoc. His suit was of white linen. The canopy of his open-sided buggy was white canvas. His horse wore a fly-net of white, right up to the top of the head, with holes for ears. As he passed the oatfield the boy gave him a wave, and Doc

Miller waved right back, trotted on in the thin settle of his own dust, and went out of sight. Those roads are generally straight, you can see a rig a long, long way off, and waste a good bit of time just looking.

The boy dropped his rake, and he said: "I will be a doctor."

This boy lived over in Watertown, a few miles northwest of Oconomowoc. A horse-and-buggy doctor had brought him into the world, and there was a general practitioner in Watertown who also had a horse and buggy, so this boy wrote home in a great fever to get permission to come back and study under Dr. William C. Spalding, a man 6' 2" tall, finely set up, with a good close beard. He was one of the two leading men in Watertown, which even then was quite a town. Ask anybody.

The family decided that young Frank (that's this boy's name) would live with grandfather Carlin but do a lot of chores. Dr. Spalding asked the boy how much time he felt he could give to his medical study. Frank replied, "How would from 9 to 3 be?" because those were the only school hours he knew. The doctor said that would be all right. Before eight each morning all the boy had to do was water and feed a couple of horses, milk three cows, feed a bunch of pigs, get the fires going in the house, and get breakfast in time to walk to town to Dr. Spalding's office.

His fixed duties were to dust and to clean the office, but *not* to sort things too much, because the doctor said he 'knew where they were.' His first professional instruction came when Dr. Spalding prowled through the bookcase and found Wilson's *Anatomy*, blew the dust off it, and said, "You learn what is in that. I'll quiz you occasionally."

That (Frank told me) was how he learned about the antrum of Highmore. He says practically every bone in the head seems to focus on the antrum of Highmore, or to radiate from it.

Another lad named Parkhurst, who was studying with Dr. Whyte across the street, chummed up with Frank, and talked him into going all the way to Chicago to the medical college. After a year and more during which our boy had full charge of a hop-field on a dairy farm, the day came for departure to Chicago. Frank had saved the year's tuition, \$75, and the rail ticket for 200 miles round trip, \$6. There was no margin for room rent, and it looked as though the whole thing was off, but his grandmother (that was grandmother Martin, not grandmother Carlin) came across with a loan of \$25. So Frank and his pal went and enrolled in the Chicago Medical College and after a while he became an M.D., then an interne at Mercy Hospital, and presently he had a chance to practice on his own.

This young fellow gravitated into specializing, but the specialty was what you might call general practice with cutting edges and grassroots psychiatry. Some 25 or 30 years after the affair of the oatfield he found himself founding and editing a surgical journal, then conceiving and organizing the American College of Surgeons. He was forced to abandon what he described as "a large and lucrative private practice" to tend to the affairs of the College.

I have no idea what the reaction of the physician may be to such a narrative, but to a layman, the trial-and-error, stumble-and-get-up crusade of this oatfield doctor in forming the College reads like a Murrow report of a field campaign:

How he had a notion on a New York bound Twentieth Century train; how he dictated an outline to the train stenographer; how he interrupted John Murphy's shaving at the old Waldorf at 34th Street by reading it to him; how Murphy backed him and asked to second his motion; how Edward Martin of Philadelphia, president of the Clinical Congress, heard his prospectus privately and said: "Go the limit, Napoleon!"; how he put the motion before 2,000 first-rate doctors to name a committee to see *whether* to create such a college, and how John Murphy's seconding brought them cheering to pass the motion. Among the first appointees were Murphy, Charlie Mayo, Fred Cotton, George Crile. This same convention, by the way, must have been pretty fertile. One of the clinic days was devoted to a discussion of cancer. Out of this day sprouted the American Society for the Control of Cancer.

Our oatfield boy recalled later how, after one of the sessions, a quiet young urologist came to him and said 'let me help wherever I can.' He later did. His name was J. Bentley Squier.

All this oatfield boy from back-of-Oconomowoc wanted to do was to try to create, out of the negligence of the over-all maternity of the AMA, a responsible new confederation of surgeons who might write a code of standards of their specialty within the universe of medicine, and of hopes which, if maintained, would enable any Fellow of the College to hold his head high in his profession, to bow it low (but challengingly) before the mysteries still to be solved.

Mark you, this youth, this good obstetrician and gynecologist with the white fright-wig, and the very red Danny-Kaye face and bright cobalt-blue eyes, was the boy in the oatfield who saw Dr. Miller ride past and said 'that settles it, I will be a doctor'—and put his mind to it. There probably isn't a more *familiar* branch of medical practice than attendance upon the pregnant and delivery of the children and subsequent rearrangement of disarrangements. This boy Frank's apprenticeship in arrang-

ing Dr. Spalding's buggy-borne saddle-bags was the foundation of his medicine. It seems unlikely to me that he would have developed his devoted following in private practice, or the support of his colleagues the whole length and breadth of surgery to found the Journal, or the College, if he had not based his realistic practice upon the *viewpoint* which a youngster suddenly discovers as these two youngsters had: one by deciding that a white fly-net on a horse was a sort of panache of man-to-man service; the other by concluding that teaching on horseback is a lot more exciting than teaching in a schoolhouse. Both impulses, at short-focus, led to the long-focus results. It is my humble theme that the most important factor that medicine has, more important far than its techniques and drugs, is a two-way faith.

III

At this point, against the rather ancient background of the saddle-baggers and the horse-and-buggy men, I propose to dive into a well of contemporary testimony in which I may quietly drown. For the propositions which I now advance to you are not known by me first-hand to be true. They are the gleanings of a lot of talks which I have had with men who feel the urgency of retaining a sort of superlative standing-army of general practitioners.

A third of the doctors of this country are now certified board specialists. There are over 55,000 of them. Individually they are as person-to-person fellows as you can find. Collectively they are a mass movement away from the field of general practice within the past 20 years. What's the reason for this mass migration? You probably have to go back for the answer to the turn of the century—the development of the study of pathology (and physiology), the discovery of bacteria and what they imply, asepsis, and then suddenly the widespread application of everything these sources seemed to be disclosing.

The first World War came along to spur the "try anything" process, and more often than not, it worked. The collection of experience piled up into a revolutionary conception of the means and horizons of medicine. The tantalizing new challenge of research beckoned to all the lads in the medical schools, hospitals, university centers, and private or endowed laboratories in industry, and they turned up such a new provocative lore of useful knowledge that it literally demanded the training and equipment of fresh specialists to cope with it!

Parallel to this opening of a hundred new doors of challenge to the young doctor came (without planning) new schemes of family life, new sorts and

climates of places of work, new ways to get there and back, new types of school and college, new means of communication—a general massive *shifting*, you might say, of the same circumstances and needs that had made ordinary saddle-bagging. Saddle-bagging suddenly found itself in a lively seat on a new streamlined merry-go-round.

Rapid change became the order of the new day.

Weelum MacLure of Drumtochty and his like gradually gave way to men who desperately hoped they had found new ways to save life, new ways to manage new tools not only to aid the sick but the well people, and happily there was a pause in which to give them a chance to prove their worth. An odd by-product of their progress and their earnestness came about in what we might call the “fall-out” of these really “radioactive” pioneers upon *their* candidates for *general practice*, so affecting their students that in some respects the general practitioner of today is an all-rounder, more able even than the specialist of yesterday.

Before insulin, no specialist in diabetes (as indeed no general practitioner) could bring recovery to a patient in diabetic coma.

Before treatment with liver, specialists in blood disease hadn't much to offer to the life span of patients who had primary anemia.

Before the specific serum therapy, and the later antibiotics, the mortality of lobar pneumonia patients was from 25 to 30 per cent, and no specialist could do much about it except shake his head and deplore the patient who left the cosmos in defiance of the percentages.

Presently all of the simple new techniques became the preventive arms of the general practitioners, *if* they were smart enough to go back to school to them. New supplies, in old saddle-bags. Supplies called *ideas*.

What I have so far quoted might seem to indicate that the general practitioner is as efficient as the tools of science that are put into his hands, and that the specialist could be a sort of cloistered laboratory luxury. To a theoretical degree that could be true.

But the fact seems to be that the very torrent of research and discovery which has made our general practitioner our specialist has tended to convert our specialist into our general practitioner.

The science of communication somehow has brought about a condition where there is hardly a crossroads in the country in which an average case of coronary thrombosis wouldn't have available to him, within reasonable transport time, the equivalent of the therapy given to President Eisenhower at Denver. In fact, as a layman, viewing the press from day to day, I sort of wonder how anybody can have a heart attack anywhere without having the door of his oxygen-coop open and a wonderfully amiable guy come in and say: “Hello, I'm Paul Dudley White. Now let's see what the hell goes on.” Yet the *Times* only the other day carried a plea for more clinics ready to serve completely doctorless communities. The task is evidently not done.

The speaker's documents concerning the two ‘saddle-bag doctors’ base on the fact that Dr. John Hamilcar Hollister was his great uncle; Dr. Franklin H. Martin married Dr. John's daughter, and therefore was the author's second cousin. The speaker didn't want this relationship known before his talk for fear it would smell of familiar bias. He then forgot to tell anybody about it until now. . . P. H.



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The Hazards Of Nuclear Power Plants

"Dangers foreseen are the sooner prevented."

Richard Franck.

Inasmuch as one of the policies of the present government of this country is the development of peaceful uses for atomic energy, it seems sensible to consider the hazards of this program. We know from painful experience that the use of electricity, gas, oil, and other modern agencies introduced within the memory of many now living, is accompanied by risks which may result in injury or death to those using them. There is, therefore, nothing surprising in the idea that the use of any new agent is likely to be associated with risk.

As the well known nuclear physicist George L. Weil has recently stated, plenty of publicity has been given the beneficial aspects of nuclear energy, but little has been published except in technical journals regarding the possible dangers of its use.* He presents a discussion of the hazards which, under the most pessimistic assumptions, could result from major accidents to nuclear power plants.

Dr. Weil points out that the principal elements to be considered are: (1) the types of accident that could occur and their effects on a power plant and its operatives and the neighboring public, (2) the probability that such accidents are likely to occur, and (3) the benefits which can be balanced against such risks. He clearly indicates that his discussion is based on theoretical considerations inasmuch as the number of high-temperature, high-power, nuclear plants is as yet too small and our experience with them too limited to form a basis for a factual appraisal.

Nuclear reactors are not only expensive but also potentially more dangerous than any other type of machine fuel now in use. Therefore great caution must be exercised in the design and methods of operation of plants which use them. Safeguards, which may add greatly to the expense of such installations, must be provided. In the operation of such plants we are dealing with radioactive materials and their fission products. In some circumstances the amount of fissionable material provided will be much larger than the critical amount. Such material, produced by the reactor fuel in the process of consumption, is highly radioactive and is capable of producing serious bodily injury and even death. These poisonous fission products, if inhaled or ingested, are from 3,000,000 to 200 million times more toxic than chlorine, the most potent of the common industrial poisons.

Two special characteristics of the fission products are important: namely, that they cannot be

* Weil, George L. Science, 1955, 121, 315.

detected by the senses and that exposures which do not cause death quickly may produce injuries which are not apparent until years later.

The maximum possible accident would be likely to occur in a nuclear power plant which had been operating for a relatively long time without change of fuel. This would result in an accumulation of a substantial amount of long-lived fission products in the core of the generator. In such a situation the nuclear reaction may get out of control in the start-up after a shutdown. The power output may increase at a rate which doubles its level. Every one thousandth of a second and the fuel temperature would rise accordingly. This might result in an explosion from the rapid formation of gases and damage the structure of the reactor sufficiently to permit release of radioactive fission products into the neighborhood. This would contaminate the building and equipment, possibly kill or injure operatives and if fission products escaped into the neighborhood they might under certain weather conditions contaminate the air of thickly populated districts for some miles and, in case of rain, also pollute water supplies.

The most promising precautionary measures are to select the most stable basic reactors, and to house the plants in gas-tight buildings. Twelve years experience with different reactors without any serious trouble is an indication that Dr. Weil has painted a truly pessimistic though by no means impossible picture for, as a matter of fact, there is no such thing as a foolproof nuclear power plant.

G.B.

Clinical Laboratory Tests

In the eighties of the last century William Osler is said to have remarked that the late George Dock knew more about then current clinical laboratory tests than any physician in the United States. Over sixty years ago when the writer was on Osler's staff the Resident Physician, William Sydney Thayer, was thoroughly versed in such tests which then included not only physical, chemical and bacteriological urinary examinations but also blood counts with differentials, the examination of smears for parasites and blood cultures. However, this knowledge was commonly used at that time in only a few large medical centers for when the writer was Director of the Bender Hygienic Laboratory in Albany, N. Y. he was called on to make such examinations in adjacent small towns because none of the local physicians had been trained in such technical procedures.

During this century the development of new laboratory and technical procedures has been ex-

ceedingly rapid so that they are now so numerous that considered judgment should be used in selecting the ones most likely to be of diagnostic value in a given patient. As Dr. F. W. Sunderman has pointed out* the indiscriminate selection of laboratory tests, especially requests for large numbers of such tests, throws excessive work on the laboratory technicians and results in delays and the overtiring of the staff. However, not only these workers but the patient and the referring physician may be responsible for errors. The patient may neglect to strictly obey orders such as fasting before certain tests by taking a cup of coffee or some drug which vitiates the result or by failing to keep urinary samples in the ice box. The referring physician, as noted, may order unnecessary tests and tired laboratory workers are more likely to make mistakes than rested ones. Dr. Sunderman's criticisms on the situation are timely and constructive.

G.B.

* Sunderman, N. Y. State Jour. Med. Vol. 56, No. 15, 1950.

Psychopharmacologic Drugs

As Dr. Harold Himwich points out in an extensive review* a new group of drugs, effective for overactive psychotic patients, has been increasingly utilized in recent years. They are most commonly described as *tranquilizers* but also as *ataraxic*, *neuroleptic*, or *neuroplegic* remedies. Their chief effect on nervous patients is to produce, by action on the brain, peace of mind or diminution in the intensity of nerve function. Dr. Himwich regards the existing group of these drugs as probably forerunners of a much larger group whose action will be useful not only in nervously hyperactive patients but also in a wider variety of behavioral disorders. As it is, the existing tranquilizers have been shown to exert potent effects on the viscera, including the gastrointestinal tract, the cardio-respiratory system, and the endocrine glands. Dr. Himwich points out that it is hardly necessary to emphasize the magnitude of the problem of mental disease. He refers to Dr. Gorman's recent book "Every Other Bed" which stresses the fact that half the hospital beds in this country are occupied by mental patients and that the growing population of our mental hospitals indicates that the treatments used before the introduction of tranquilizers (psychoanalysis, electroshock, insulin hypoglycemia, and sedation with barbiturates) have not been as successful as the new transquilizing drugs in conditioning patients for a return to normal living

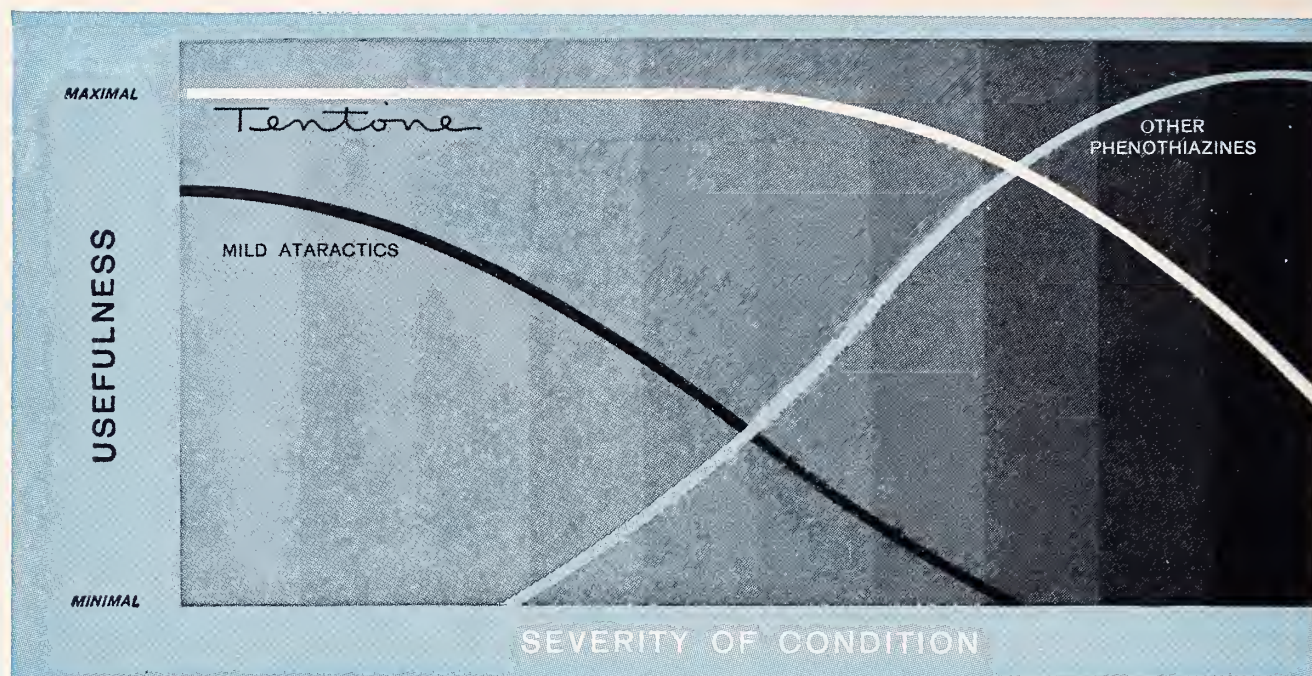
(Continued on Page 342)

* Science, 1958, 127: 3289, pp. 59-72.

ANNOUNCING



A HIGHLY EFFECTIVE
TRANQUILIZER FOR
EXTENDED OFFICE
PRACTICE USE



**POSITIVE CALMING
ACTION ADAPTED
FOR LOWER RANGE
OF EMOTIONAL
DISORDERS**

The development of TENTONE® Methoxypromazine Maleate *Lederle* does not duplicate primary function of existing tranquilizers. TENTONE fills the need for a practical, potent agent for extended use in everyday practice (as illustrated above).

Action of TENTONE Methoxypromazine Maleate approaches that of the strong phenothiazines without their drawbacks. Calming response is positive and rapidly apparent to both patient and physician. However, as a basic phenothiazine modification, TENTONE allows full therapeutic application in the mild and moderate range of anxiety-tension and somapsychic disorders most usually seen in general practice.

**EXCELLENT
TOLERATION —
MARKED
REDUCTION IN
COMPLICATIONS**

Incidence of untoward reactions is exceptionally low and approximates the mild ataractic drugs. Reduction in sensitivity reaction, intestinal distress, blood, brain or liver toxicity is striking, particularly in the low dosage range. TENTONE exhibits greater freedom from depression and drug habituation. Physical and psychic orientation is usually preserved. Occasional drowsiness may be encountered, particularly in higher dosages. In moderate to more severe cases, this sedative effect may be desired.

TENTONE has thus been described as one of the easiest tranquilizers to handle in office practice. In indicated cases, the physician may be relieved of the patient's unnecessary concern over his own illness. In contrast to the previous types of drugs, complaints over induced distress or inadequate benefit are rare.

WHEN MORE THAN
MILD SEDATIVE
EFFECT IS DESIRED

Consequently, TENTONE is more useful than other ataractic drugs in two areas: (1) mild to moderate conditions—when more than mild sedative effect is sought, (2) middle range of moderate to severe cases—when less than psychopathology is involved.

Indications include ■ common anxiety-tension states ■ obsessive-compulsive behavior ■ neurosis ■ depression ■ situational anxiety and hysteria

And the emotional components of: ■ agitation ■ restlessness ■ tremors ■ insomnia ■ alcohol- and drug-withdrawal syndrome ■ hyperkinesis ■ prenatal anxiety ■ rheumatic disorders ■ dermatoses ■ menopausal syndrome ■ premenstrual tension ■ peptic ulcer, other g.i. disorders ■ asthma, other allergy ■ multiple sclerosis, arteriosclerosis ■ malignancy, other progressive diseases

POSSIBLE
POTENTIATION OF
ANALGESICS
AND NARCOTICS

Since tranquilizing drugs may potentiate the action of pain-relievers, sedatives, and barbiturates, they should be used with caution in conjunction with them, or to achieve a greater response to these drugs in various conditions when desired. They may also be useful in reduction of effective dosage to better tolerated, or non-habituating levels.

ADAPTABLE
LOWER DOSAGE
RANGES

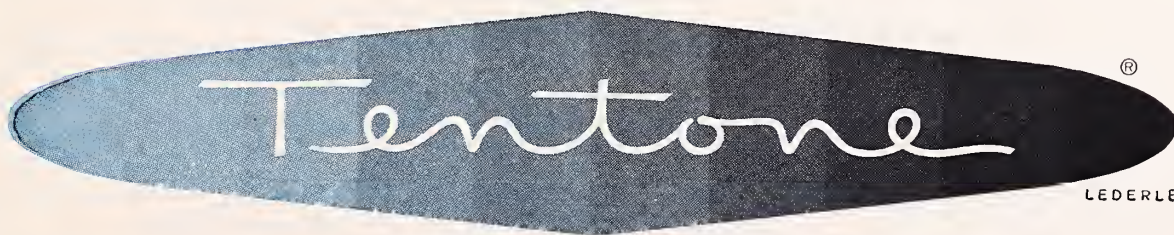
Dosage must be individualized to severity of condition and response desired.

In mild to moderate cases: varies from 30 to 100 mg. daily.

In moderate to severe cases: from 75 to 500 mg. daily.

In psychotic or institutionalized patients, TENTONE may be useful as a substitute when toxicity precludes effective dosage of other phenothiazines, or as maintenance after hospitalization. Dosage may range from 100 to 1500 mg. daily in divided doses.

Supplied: 10 mg., 25 mg. and 50 mg. tablets



LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

conditions. He points out, citing examples, that the new remedies have been used with good results in schizophrenia and in hyperactive patients whose delusions render them a menace to the public, and that they are valuable in some psychoses. Like many new drugs they have sometimes produced undesirable side reactions but rarely cause serious complications. Leaving aside their use in diseases other than those obviously classified as psychoses and neuroses, it is clear that we are dealing with a new and valuable group of remedies and the article is well worth the perusal of those specially interested in the group of phenomena briefly noted in this discussion.

G.B.

Six Lands to Weigh Cancer Therapy in Million Patients

The U.S. and several European nations have agreed to pool their data on about one million cancer patients, in an unprecedented international effort to evaluate the relative effectiveness of various therapeutic techniques.

They particularly want to find out whether there is a significant difference between survival rates in Europe, where radiation is emphasized, and in this country, where the emphasis has been on surgery.

A second goal is to obtain badly needed information on the effectiveness of chemotherapy, hormones, and other approaches in terms of the total experience of whole nations rather than individual institutions.

Plans for the large-scale program were drafted at a two-day conference sponsored by the National Cancer Institute and attended by delegates from the U.S., England and Wales, Denmark, Finland, and France.

GOAL IS UNIFORMITY

Uniform definitions and procedures for reporting facts obtained from the respective cancer registries were established in order to permit valid comparisons, now almost impossible because of differing frames of reference. The plan is to report the first results to the International Cancer Congress in 1962.

Authorities said a great problem in end-results evaluation has been the fact that reports from individual institutions—where the staff may be highly specialized and the patients selected—do not necessarily reflect the general experience of most therapists. And comparison of different reports with different base lines is difficult.

In an attempt to solve the problem, NCI two years ago set up an end-results evaluation program in this country, in which 200 hospitals are making

uniform reports on their patients. NCI collects and analyzes the data. The program is now being extended on an international basis.

WILL REPORT ALL CASES

The delegates agreed that, instead of being selective, they would report on every cancer patient admitted to a hospital. They also agreed to measure survival time from the date of diagnosis. Reports on radiation and surgery will note whether the procedure was performed for hormonal effect as well as tissue destruction. And uniform definitions of cancer types, patient characteristics and therapeutic techniques will be used.

Cancer registries in the participating countries are beginning to recast their present records in the new format. They expect to begin collecting the new data after another planning session this fall. By then, Russia and possibly other countries may join in the project.

Muscle Relaxant Found Uricosuric

Zoxazolamine, a drug used primarily as a muscle relaxant, has proved a potent uricosuric agent in treatment of tophaceous gout in clinical trials, the National Institute of Arthritis and Metabolic Diseases of Bethesda, Maryland announced.

Dr. J. E. Seegmiller, of the Institute's arthritis and rheumatism branch, said that the drug, administered orally, has been demonstrated to be four to six times more potent than probenecid, the agent now most commonly used in increasing uric acid excretion of gout patients.

About 10 patients with severe gout have received the drug at NIH and nearly all have improved, Dr. Seegmiller said. Clinical trials elsewhere throughout the country on many more patients with less severe gout have substantiated these findings, he added.

When administered in combination with another new compound, sulfinpyrazone, zoxazolamine appears to have an added therapeutic effect, Dr. Seegmiller said.

Studies at NIH have shown that zoxazolamine is rapidly absorbed and that the effect on uric acid excretion persists for only about six hours. It is therefore advisable to administer the drug in small divided doses throughout the day, he added.

Unlike other agents for relief of skeletal muscle spasm, which act peripherally, zoxazolamine appears to act centrally, depressing transmission through subcortical, brain stem, and polysynaptic pathways, said Dr. John J. Burns, of the National Heart Institute, who first discovered its antigout properties at Mount Sinai and Goldwater Memorial Hospitals in New York.

CLINICAL MEDICINE

Whiplash Injuries

David M. Bosworth, M.D.*

I. Lesions developing in the cervical spine following trauma either direct or indirect. Diagnosis of the specific involvement of definite anatomical structures require—

(a) History—

1. Mode of onset—depends on type of accident.
2. Length of time between the accident and the beginning of symptoms.
3. Exact location of the part of the neck injured.

(b) Past History is also necessary, especially whether there had been any previous injuries to neck or previous operations or previous illness which might have a bearing on the complaints in the head and neck.

(c) A thorough examination should reveal—

1. Local finds.
2. Any deformity of neck either observed or determined by x-ray.
3. Is there any limitation or abnormal motion of the neck.
4. Measurements of the neck or of one arm should be obtained at various levels which might be attributed to atrophy or nerve injury.
5. Has there occurred a change in skin sensation such as numbness or hypersensitivity.
6. Has the circulation of the arm been affected, differences in blood pressure in the two arms and hands in color or temperature should be noted.
7. Are the reflexes intact or altered, trapezius, biceps, brachial, triceps.
8. Is the muscle power normal or weak.

The speaker emphasized the necessity to look for particular swellings, heat or redness, localized tenderness, deformities caused by a reverse curve or lateral shift, rotation or fixed flexion of the neck, an increase or decrease in the range of motion.

(d) The following modalities of treatment were assessed. The speaker emphasized that even though a treatment of choice is applied in any particular case the injuries may heal very slowly and the incapacity may persist from a day to many months.

1. First the patient should be put at rest from one to two days to four or five weeks depending upon the patient's rate of improvement.
2. Medication should be prescribed mainly for the control of pain and anxiety.
3. *Manipulation*—In neck injury the patient should be sitting in a chair with the head in a halter with some stretching on the

neck. Only then can the neck be manipulated and this preferably by an expert.

4. Very important is the use of localized heat in the form of diathermy, infra-red ray, hot water bottle or wet heat with massage of the neck.
5. The speaker mentioned a brace only to condemn it. He warned against its use except in most unusual situations and then only as a temporary measure. He pointed out further that if a brace becomes necessary, the patient is better off to submit to an open reduction and fusion of the neck surgically. He warned against the use of ultra sound emphasizing that this modality should not be used in injuries to the neck.
6. With regard to traction—(A) The first effort to be made is to place the patient in bed with traction by the use of two bandages, one under the chin and the other under the occipital area. Then have them plinned in the center and twisted in the same manner as a head halter using No. 3 weight only. If this is not satisfactory then (b) the patient could be hospitalized and skull traction applied by an expert and 25-30 pound weight could then be used.
7. If it is the judgment of the doctor that some sort of support will be necessary for a long time, then fusion is indicated.

II. Lesions of the neck as they occur—

- (a) Muscular—traumatic myositis, fibrosis as a sequel to hemorrhagic infiltration of muscles.
- (b) Ligamentous.
- (c) Arthrodial—causing a narrowing of the 5th cervical interspace.
- (d) Osseous.
- (e) Neural.
- (f) Functional.
- (g) Retropharyngeal.

III. General observations—

There is no room, nor reason, for making a loose diagnosis such as Whip-Lash Injury of the Neck. Such a vague diagnosis is thoroughly unscientific, may lead to extreme abuse of those responsible for such injuries, and tends to be employed by those either without the knowledge to make a specific diagnosis or for purposes of exaggeration of possible residual injury in order to expand the amount of benefit to be secured in a legal action. The application of the term Whip-Lash Injury to these structures despite the lack of similarity of the neck (a relatively short jointed structure, made up of separate rigid segments, with a ten pound weight on its end) to a whip (which is long, unjointed, evenly flexible, throughout its length and has no weight on the end), is not a rational procedure. For this reason even changing the term to *Whip-Lash Mechanism of Injury* is unacceptable. The neck is not a whip. There is no question but what injuries accruing to specific structures of the neck may be serious. The use of this

* Professor and Director of Orthopedic and Traumatic Surgery, New York Polyclinic Medical School and Hospital, New York.

term, however, has developed to such extent as to almost maliciously tend to magnify and prolong the actual effects of injury and to confuse patients, courts, and juries. While pointing out the actual, and sometimes the severe, injuries that involve the cervical region of the spine, we shall at the same time attempt to "lay the ghost" of the Whip-Lash Injury. The term, to the honest, is merely a bulwark behind which ignorance skulks; to the dishonest, a mirage with which to confuse and delude.

Abstract was prepared by **Oliver B. Andrus** from lecture delivered to Academy General Practice, Hartford on October 1958.

Dietary Fat And Arteriosclerosis—Evidence From Experimental Pathology*

L. L. Waters, M.D.

Americans have always liked to eat, and the availability of plenty of dairy products, eggs, meat and rich, tasty dishes in our homes has become traditional—a part of the national high standard of living. It now appears, to judge from the number of articles on the subject in the lay and medical press, that we "are eating ourselves to death"! This opinion is voiced in spite of common knowledge that the average life span of Americans has increased considerably in the last half century. Improved nutrition has undoubtedly played its part in this advance along with other dramatic achievements in public health and medicine. Nevertheless, the fact is that modern, highly civilized man, while achieving longevity, has exposed himself increasingly to the ills of old age. Elderly patients with cardiovascular disease or cancer fill the nursing homes and sanatoriums once occupied by younger persons with chronic infectious diseases.

There is voluminous epidemiological, clinical and experimental evidence that diet and the level of the lipids in the blood are associated in some way with the development of arteriosclerosis, which in turn is responsible for much of the cardiovascular disease of older people. Most of this evidence is associational in nature. Because of this and because they strike directly at certain of our traditional concepts of good living, the implications for prevention or therapy derived from such evidence are not accepted readily by patient or doctor. Both demand proof of a cause and effect relationship between dietary fats and arteriosclerosis—and require that the mechanisms involved be understood and demonstrated. Although so urgently needed, little direct information on pathogenesis of arteriosclerosis in relation to diet and to lipids exists. Experimental pathologists—whose province this is—have been woefully limited in their study of the disease by lack of understanding of the basic chemistry and biophysics involved and by lack of experimental methods for the controlled study of lipid-connective tissue interactions. Nevertheless, a body of facts is accumulating which may be said to represent the viewpoint of at least *one* pathologist in regard to the pathogenesis of fatty arteriosclerosis. These may be briefly described and their significance indicated.

Two very old and basic facts pertinent to the pathogenesis of arteriosclerosis are, first that the lesions contain lipid, and second that they are focal in distribution. The first observation raises the central question itself of the relation of fats in

the diet and of fat metabolism to arteriosclerosis. The second indicates the importance of local changes in the arterial wall for the establishment of the arteriosclerotic process.

The meaning of the focal distribution of the lesions of arteriosclerosis may be conveniently discussed first. Lesions occur preferentially at sites in the arterial tree where maxima of physical stress might be expected—at branches, at the bases of heart valves, and in the abdominal aorta, where the vessel is relatively firmly fixed. Also, the vessels of the lower extremity suffer much more than those of the upper. Stress beyond physiological limits for blood vessels as for other tissues results in injury. Injury in turn results in local inflammation, an initial and cardinal feature of which is increased endothelial permeability. If the blood vessels of animals are experimentally stressed by acute episodes of hypertension, they are injured and it is most frequently at the origin of branches that edema and hemorrhage occur. Blood vessels in animals also develop local inflammation following the administration of various chemicals, after the induction of experimental hypersensitivity or in the course of certain infections. The arterial inflammatory lesions that follow stress initiated by any of these means are qualitatively similar, although they vary quantitatively with the intensity and duration of the stimulus.

The experimental lesions described do not contain stainable lipids if the laboratory animals are maintained on low fat diets. However, if cholesterol-rich diets are fed coincidently with the production of the lesions, large quantities of lipids are deposited selectively at the sites of arterial damage, and the basic inflammatory response is transformed into a fatty arterial granuloma that has many of the morphological characteristics of arteriosclerosis in man. Thus it would seem that localized inflammation—in its broad sense, increased local endothelial permeability—and an alteration in blood lipids are necessary for the establishment of the type lesion of arteriosclerosis. One factor without the other is not enough. It could be theorized that a person without vascular lesions could eat any kind or amount of fat and would never develop arteriosclerosis. However, since some degree of arteriosclerosis is found in nearly every adult human in this country coming to autopsy, it is evident on this theory that injury must have existed. It appears that in almost everyone's arteries there are foci of increased endothelial permeability, which are critical in the localization of lipids from the blood stream.

The effect of localization of lipids on basic arterial inflammatory lesions is the next problem of significance for the pathologist. Study of the development and healing of experimental connective tissue—serum lipid lesions is revealing. The presence of serum lipid in an avascular connective tissue site leads to death of connective tissue cells and to a foam-cellular granuloma which otherwise would not have developed. Such lipid-initiated events often induce vascularization of the lesion. Vascularization, in turn, brings enzyme-rich leucocytes and blood into the area, intensifying inflammatory reactions within the plaque with their attendant edema, hemorrhage and ulceration. The hazard of subsequent thrombosis is increased. In summary it can be said that deposit of serum lipids in an inflammatory focus in an artery increases the size of the lesion and predisposes it to thrombus. The functional significance of these changes is obvious.

The next question concerns the nature of the serum lipids deposited within the vessel wall. It can be shown that both chylomicrons of alimentary hyperlipemia and the lipoproteins

* From the Department of Pathology, Yale University School of Medicine. Written for the Committee on Nutrition, Connecticut State Medical Society. The opinions expressed are those of the author alone.

of normal human serum when injected intravenously localize selectively in foci of injury in the arterial walls of animals. Also lipoproteins from serum of animals fed cholesterol localize at these sites. However, in ordinary circumstances chylomicrons do not elicit granulomatous connective-tissue reactions and progressively disappear. Contrariwise, lipoproteins elicit vigorous foam-cellular reactions in arterial connective tissue. Thus it would appear that lipoproteins, not chylomicrons, at least in the early lesions, are responsible for the type changes of arteriosclerosis.

In the animal experiments it has been shown further that lipoproteins will deposit at sites of arterial injury at times when the levels of serum cholesterol are comparable in the animals to those considered to be in the usual ranges for normal Americans. Also, and this is significant in nutritional considerations, the higher the animal's cholesterol and lipoproteins the greater the lipid deposit, and the larger and more intense the granulomatous reactions.

If one accepts these observations, which are as direct as pathology is yet able to offer, then it would seem sensible to attempt to keep lipoproteins of serum as low as possible if arteriosclerosis is to be avoided. It must be borne in mind that certain individuals may be more susceptible to the development of arteriosclerosis than others because of factors that affect unusually either of the two variables—the integrity of the arterial walls or the levels of the serum cholesterol-lipoprotein complexes.

To avoid entirely the effects of deposited serum lipids in arteries, the evidence from experimental pathology indicates that blood cholesterol and lipoprotein levels should be well below the levels now generally accepted as normal. Means for achieving this are not yet available in dietary regimens now being tested. However, trends of blood lipid values in diet trials involving fat and cholesterol restrictions or substitution of unsaturated fats appear in the main to be in the right direction. These experiments, for experiments they are, should be continued. Prevention of all arterial injury throughout a lifetime would seem to be a formidable task indeed. But given an unavoidable minimum of arterial injury, dietary regimens maintaining cholesterol and lipoprotein levels as low as possible should minimize the development or progression of the disease.

Thus more than ever it would seem imperative for the nutritionist to attempt to learn by dietary means how to control serum cholesterol and lipoprotein levels and for biochemists and biophysicists to undertake comprehensive investigations of serum lipoproteins under conditions existing in the blood and in arterial tissues.

Chemotherapy Praised In Leukemia

Chemotherapy is steadily increasing the survival expectancy of children with acute leukemia and, although providing no cures, offers the best available means of "buying time" for the patients while promising research leads are pursued, said Dr. Sidney Farber, Scientific Director of the Children's Cancer Research Foundation, Boston.

Out of 900 leukemic children treated with drugs at Children's Hospital, Boston, in the last several years, about 50 per cent survived at least 14 months and an additional 10 per cent survived at least 32 months, Dr. Farber said. Many of those patients are still alive, including two who have survived five years.

Dr. Farber, here to testify in support of a bill to create an international institute of health within the National Institutes of Health, said that methotrexate and 6-mercaptopurine provide the longest remissions. In most cases, ACTH and cortisone are used adjunctively, he added.

Dr. Farber also urged that physicians refer to hospitals for bone marrow biopsies all children with anemia of long duration for which there is no evident explanation. Many cases of early leukemia have been thus diagnosed, he added.

Research under his direction has added support to the hypothesis that there is no familial factor in childhood leukemia, he said. "Our studies on large numbers of patients indicate no particular likelihood that a second child in a family will contract leukemia because the first child has had it," he said.

Antibiotics Should Not Be Used in Cosmetics

The inclusion of antibiotics in cosmetics was opposed today in a report of the American Medical Association.

There is no evidence that "constant degerming" of the skin, such as would be presumed to occur with the use of antibiotics in cosmetics, is "necessarily always or even frequently desirable," according to the report appearing in the current A.M.A. Journal.

The report was written by two New York dermatologists, Drs. Carl T. Nelson and Marion B. Sulzberger, for the A.M.A. Committee on Cosmetics.

Antibiotics are now being used in deodorants to help kill bacteria and thus reduce odor. They have also been suggested for inclusion in face creams and in blemish lotions, according to Veronica L. Conley, Ph.D., committee secretary.

In a note, Dr. Conley said, "The persistent trend toward the incorporation of pharmacologically active ingredients into cosmetics has caused growing concern among the medical profession. . . . Medical experience provides considerable evidence of the health implications in the widespread, prolonged or indiscriminate use of antibiotics."

There is essential agreement, the report said, that antibiotics generally useful in the treatment of systemic infections should not be used in cosmetics. However, it has been proposed that certain other antibiotics (bacitracin, neomycin, polymyxin, and tyrothricin) be permitted in cosmetic preparations.

Even these, which are rarely used other than on the skin, carry certain dangers, according to the report. Some persons may be sensitive to the drugs and develop allergic reactions from continued contact. In addition, little information is available about the possibly harmful effects of the various antibiotics after absorption through the skin.

The possibility of bacteria becoming resistant to the effects of the antibiotics may be increased through prolonged use of the drugs. This would mean that when the drugs must be used to treat a disease caused by a resistant strain of bacteria, they would be ineffective.

In conclusion, the report said, "Except for the deodorant action of such agents in reducing axillary odors, their incorporation in cosmetics has not been proved to be of specific value, and their widespread use in cosmetics could well represent an increased risk to general public health as well as to certain hypersensitive individuals."

FROM THE SECRETARY'S OFFICE

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Josephine P. Lindquist
Assistant to Executive Secretary

Membership Report Of The Secretary

FAIRFIELD COUNTY			Resignations, transfers	23	
Membership—January 1, 1958	818		(Non-payment dues, etc.	6	43
New Members	40			—	—
Less:			Net Loss		2
Deaths	9		Membership—December 31, 1958		886
Resignations, transfers	7				
Non-payment dues, etc.	4	20	NEW LONDON COUNTY		
	—	—	Membership—January 1, 1958		171
Net Gain		20	New Members	7	
Membership—December 31, 1958		838	Less:		
HARTFORD COUNTY			Deaths	5	
Membership—January 1, 1958	977		Resignations, transfers	3	
New Members	48		Non-payment dues, etc.	0	8
Less:				—	—
Deaths	10		Net Loss		1
Resignations, transfers	16		Membership—December 31, 1958		170
Non-payment dues, etc.	2	28	TOLLAND COUNTY		
	—	—	Membership—January 1, 1958		21
Net Gain		20	New Members	1	
Membership—December 31, 1958		997	Less:		
LITCHFIELD COUNTY			Deaths	0	
Membership—January 1, 1958	131		Resignations, transfers	0	
New Members	7		Non-payment dues, etc.	0	0
Less:				—	—
Deaths	1		Net Gain		1
Resignations, transfers	2		Membership—December 31, 1958		22
Non-payment dues, etc.	2	5	WINDHAM COUNTY		
	—	—	Membership—January 1, 1958		63
Net Gain		2	New Members	3	
Membership—December 31, 1958		133	Less:		
MIDDLESEX COUNTY			Deaths	0	
Membership—January 1, 1958	112		Resignations, transfers	1	
New Members	8		Non-payment dues, etc.	0	1
Less:				—	—
Deaths	2		Net Gain		2
Resignations, transfers	0		Membership—December 31, 1958		65
Non-payment dues, etc.	1	3	ASSOCIATES MEMBERS		
	—	—	January 1, 1958		11
Net Gain		5	Less Deaths		0
Membership—December 31, 1958		117		—	—
NEW HAVEN COUNTY			Associate Members—December 31, 1958		11
Membership—January 1, 1958	888		Total Society Membership—January 1, 1958		3181
New Members	41		New Members		155
Less:				—	—
Deaths	14		Total Membership—December 31, 1958		3336
			Less:		
			Deaths	41	

Resignations, transfers	52	
Non-payment dues, etc.	15	108
	—	—
Total Society Membership—December 31, 1958		3228
Net gain for year	45	

TOTALS

Fairfield	838
Hartford	997
Litchfield	133
Middlesex	117
New Haven	886
New London	170
Tolland	22
Windham	65
	—
	3228
Associate Members	11
	—
	3239

New Members

FAIRFIELD COUNTY

Barbara Bates, Greenwich
Edward G. Bradley, Bridgeport
James A. Clayton, Greenwich
Armand B. Cognetta, Stamford
William H. Cook, Bridgeport
Jacob de Jong, Newtown
Frank Di Corato, South Norwalk
Eckart G. Doering, Greenwich
Paul G. Erdelyn, Stamford
Robert P. Fornshell, Danbury
Gail A. Gaines, Newtown
Eugene B. Herman, East Norwalk
Philip B. Jensen, Greenwich
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Sanford J. Perlis, Westport
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John L. Meyer, Hartford
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Donald G. Russell, New Britain
Elliot Sicklick, Hartford
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Selwyn S. Wolfson, Hartford
Edward J. Zaczynski, Suffield

MIDDLESEX COUNTY

Philip Gray, Portland
Ciro Veneruso, Middletown

NEW HAVEN COUNTY

J. Robert Cornwell, Bristol
Orlando F. Gabriele, New Haven
Gordon J. Gilbert, New Haven
John F. Hennessey, Meriden
Robert J. Kerin, Milford
Donald W. King, New Haven
Gerhard T. Mack, Cheshire
Charles A. Marciano, Jr., Meriden
Nicholas J. Milazzo, Ansonia
Manuel Nunes, Waterbury
Martha C. Raphael, Southbury
Kurt F. Schmidt, New Haven
Daniel P. Schwartz, New Haven
David Seligson, New Haven

NEW LONDON COUNTY

James D. Balfour, Norwich
Jane W. Tillinghast, Norwich

Election Of Student Members

(Council Meeting March 18, 1959)

James F. P. Daly, Jr., Bridgeport; Georgetown University Medical School—Class of 1962; Pre-Med: Fairfield University. Parent: James F. Daly.

Arthur H. Hayes, Jr., Old Greenwich; Georgetown University Medical School—Class of 1962; Pre-Med: Santa Clara University. Parent: Arthur H. Hayes, Sr.

Charles A. Olivia, Trumbull; Georgetown University Medical School—Class of 1962; Pre-Med: College of the Holy Cross. Parent: Charles J. Olivia.

Stanley J. Keating, Jr., Bridgeport; Georgetown University Medical School—Class of 1962; Pre-Med: College of the Holy Cross. Parents: Stanley J. Keating, Sr.

Anita Paine, Fern Road, Litchfield; Harvard Medical School—Class of 1962; Pre-Med: Smith College. Parent: Hebard Miller Paine.

Meetings Held In May

- 6 Advisory Committee on Nutrition to Committee on Public Health
Connecticut Health Careers Committee
- 7 Joint Conference Committee with Conn. Pharmaceutical Assoc.
- 13 Sub-committee on Toxemia of Committee on Maternal Mortality & Morbidity
- 14 Committee on Public Health

**New Medicare Information Received From Office
For Dependents Medical Care,
Washington, D. C.**

There has been received from the office of the Surgeon General, U. S. Army, which has charge of the Office for Dependents' Medical Care, a letter which contains a number of matters which should be called to the attention of all physicians:

1. *Delay in Medicare Billings*—It can be readily understood that delayed billing causes many problems for the Government, the contractors, the dependent or sponsor, etc. It is urged that timely bills be sent.

2. *Future Claims*—It is emphasized that Medicare contracts call for payment to be made on the basis of "complete" claims. It is urged that hospitals and physicians obtain all the necessary information, including the Medicare Permit, if required, or make arrangements for obtaining same. It is especially important to examine the DD Form 1173 (Uniformed Services Identification and Privilege Card) and to obtain and record the information thereon, or to obtain adequate documentation establishing that the patient is an eligible dependent of an active duty member of the Uniformed Services. Both hospitals and doctors are urged to submit claims as soon as care has been terminated. This will cut down on a good deal of correspondence, and the seeking of further information, since with the passage of time records are displaced and difficulty experienced in assembling all the information required to submit a complete claim. The change of the status of the serviceman is called to the attention of everyone and the change of area in which the serviceman is working may be important. Sometimes difficulty is encountered by the Uniformed Services in contacting the reassigned member or a former serviceman and his dependents after discharge.

3. *Old Claims*—It is urged that old claims be submitted as soon as possible. With the passage of time it becomes more and more difficult to process these claims and resolve the difficulties which arise in connection with them.

4. It is urged that the contents of what has been stated above be brought to the attention of hospitals and physicians as soon as practicable.

5. Progress in cleaning up old claims and progress in cutting down on the time-lag between termination of care and submission of claims will be the subject of inquiry on future visits to contractors by representatives of the Office for Dependents' Medical Care.

The letter is signed by Floyd L. Wergeland, Brigadier General, M.C., Executive Director, Office for Dependents' Medical Care.

DANIEL F. LEVY, M.D., *Coordinator*

**ACUTE EMOTIONAL DISORDERS COMPLICATING
MATERNITY CARE**

	PARA. NO.
General	1, 2, & 3
Care Authorized	4
Care Not Authorized	5
Administration by Contractors	6
Procedure for Requesting Extension of 21 Days	7

1. This letter supersedes any instructions previously issued concerning this subject which may be in conflict with the contents as stated herein for Acute Emotional Disorders Complicating Maternity Care.

2. Increasing evidence has come to the attention of the Office for Dependents' Medical Care indicating a need for clarification of the extent to which the Government will pay in the case of *eligible dependents who develop acute emotional disorders complicating pregnancy or constituting postpartum psychosis occurring within the authorized six (6) weeks postpartum period*. This clarification is in consonance with the provisions of the Program relating to complete obstetrical and maternity services.

3. Due to the separate contract arrangements relating to payment of hospital and physician charges, this subject requires separate consideration for the procedures relating to payment of the care identified in the preceding paragraph.

4. CARE AUTHORIZED

a. Antepartum Period

(1) Hospital Services: In-hospital care may be authorized for limited periods when such cases *constitute an actual complication jeopardizing pregnancy*. Requests for payment of in-hospital care of the acute phase of the emotional disorder arising during pregnancy must be accompanied by certificate(s) signed by the attending physician and/or the physician providing psychiatric skills. This certification of clinical facts must be in sufficient detail to establish the nature of the acute phase of the emotional disorder which is considered to jeopardize the pregnancy. Payment for the acute phase of the emotional disorder will be limited solely to services required for its management.

(2) Physician Services: To preclude delays in payment and prolonged correspondence, requests for payment of physician services (DA Form 1863) related to in-hospital *management* of the case submitted by the attending physician and/or the physician providing psychiatric skills must show the identical certification as required by paragraph 4a (1), above.

b. Postpartum Period

(1) Hospital Services: To be payable under the Dependents' Medical Care Program, the *admission* for in-hospital care of postpartum psychosis must have occurred during the authorized six (6) weeks postpartum period. The *maximum* Government liability will be limited to the management of the acute phase of the postpartum psychosis. For this service to be payable, claims must be accompanied by certificate(s) of the clinical facts signed by the attending physician and/or the physician providing psychiatric skills. This certification must indicate that an acute phase of the postpartum psychosis existed at the time of admission to the hospital and that the acute phase extended through the entire period covered by the claim submitted.

(2) Physician Services: Requests for payment of physician services related to in-hospital management of the case identi-

fied in paragraph 4b(1), above, must be accompanied by the same certification as indicated in that paragraph. This certification must accompany the DA Form 1863 (Claim) submitted by the attending physician and/or the physician providing psychiatric skills.

5. CARE NOT AUTHORIZED—The contents of this letter do not authorize payment for:

a. *Pseudocyesis* or its management as this condition has never constituted authorized care under the Dependents' Medical Care Program.

b. *Outpatient care* for acute emotional disorders.

6. ADMINISTRATION BY CONTRACTORS

a. *Antepartum Care*

(1) Contractors Paying Hospitals—When a DA Form 1863 (Claim) submitted by a hospital is accompanied by the certification required in paragraph 4a(1), above, and the claim is otherwise complete and payable, the contractor may effect payment without further reference to this office when the *hospitalization does not exceed 21 days*.

(2) Contractors Paying Physicians—When the DA Form 1863 (Claim) submitted by a physician is accompanied by the certification required in paragraph 4a(2), above, and the claim is otherwise complete and payable, the contractor may effect payment without reference to this office when the *hospitalization does not exceed 21 days*. The physicians' fee will be paid in accordance with their usual charges or those set forth in the applicable Schedule of Allowances, whichever is less, or as determined under the applicable contract provisions (Special Report).

b. *Postpartum Care*

(1) Contractors Paying Hospitals—When the DA Form 1863 (Claim) submitted by a hospital is accompanied by the certification required in paragraph 4b(1), above, and the claim is otherwise complete and payable, the contractor may effect payment without reference to this office when *hospitalization does not exceed 21 days*.

(2) Contractors Paying Physicians—When the DA Form 1863 (Claim) submitted by a physician is accompanied by the certification required in paragraph 4b(2), above, and the claim is otherwise complete and payable, the contractor may effect payment without further reference to this office when *hospitalization does not exceed 21 days*.

c. *Unusual Cases Extending Beyond 21 Days*—In those exceptional instances where required management of the acute phase of the emotional disorder (antepartum or postpartum) is expected to exceed 21 days, prior approval for payment of any additional care in excess of 21 days must be obtained from the Contracting Officer, Office for Dependents' Medical Care. The request from the hospital for prior approval, as explained in paragraph 7, below, must be accompanied by a report of the clinical nature of the acute phase necessitating the extension. Our experience indicates that necessity for such care beyond 21 days is most uncommon.

7. PROCEDURE FOR REQUESTING EXTENSION OF CARE BEYOND 21 DAYS

a. Upon admission of a maternity patient for management of an acute emotional disorder under the Dependents' Medical Care Program as stated above, the *hospital administrator* should immediately contact the attending physician and/or physician providing psychiatric skills to ascertain the length

of hospitalization required for management of the acute phase.

b. When it is indicated that hospitalization will exceed 21 days, the *hospital administrator* should immediately obtain from the physician and/or physician providing psychiatric skills, a report as required by paragraph 6c, above, containing the following information:

(1) The name of the dependent; (2) date of admission; (3) diagnosis; (4) nature of acute problem; (5) prognosis; (6) service members name; (7) serial number; (8) branch of service; (9) duty station; (10) name of the physician(s); (11) length of time for which extension of management of the acute phase at government expense is requested, with justification therefor.

c. Both the request for extension and the report will be forwarded *directly* to the Contracting Officer, Office for Dependents' Medical Care, Office of The Surgeon General, U.S. Army, Washington 25, D. C. Because of the shortness of time, *both the request for extension and the report must be submitted by the end of the first ten (10) days of hospitalization and be forwarded by Air Mail, if more expeditious*. A copy of the request for extension only, will be sent by the hospital administrator to the concerned contractor paying hospitals and the concerned contractor paying physicians, respectively.

d. In those exceptional cases *where extensions* of time beyond 21 days are *authorized* by the Contracting Officer, Office for Dependents' Medical Care, the hospital and the contractors paying hospitals and physicians will be notified simultaneously. In these cases, the DA Form 1863 (Claim) submitted by the hospital and physician(s) for payment must have attached thereto a copy of the Contracting Officer's authorization.

e. When an *extension* of time is *not authorized*, the Contracting Officer, Office for Dependents' Medical Care, will notify the hospital and the concerned contractors paying hospitals and physicians of the date when the Government's liability for payment did, or will, terminate.

STATEMENT OF ATTENDING PHYSICIAN WITH
REFERENCE TO 2d TRIMESTER OF PREGNANCY
ON OR BEFORE 1 OCTOBER 1958

1. A number of inquiries have been received from Medicare Contractors as to whether this office contemplates establishing a cut-off date for accepting the statement of the attending physician that the maternity patient, residing with sponsor, had reached the second trimester on or before 1 October 1958. (ODMC Letter No. 16-58, Par 5a(3)).

2. The physician's statement is acceptable in those instances where the delivery is performed on or before 30 April 1959. This position was reached after careful consideration of the maximum normal period of gestation, a reasonable period of time to allow for unusual cases, and the information likely to be available to the physician when he made the determination that the patient had reached her second trimester of pregnancy on or before 1 October 1958.

3. Where delivery is performed after 30 April 1959, a PERMIT will be required when the dependent patient is residing with sponsor. There may be a few cases, certified to have reached the second trimester on or before 1 October 1958, which the physician believes to be so unusual as to warrant special consideration. In those instances where the phy-

sician requests that his claim be reconsidered, the fiscal administrator should forward, to this office, the DA Form 1863, the physician's statement, and any other pertinent information supporting the claim.

STATEMENTS REQUIRED OF PHYSICIANS TO SUBSTANTIATE CLAIMS

1. A number of inquiries have come to the attention of this office concerning the extent to which a Fiscal Administrator should go in verifying physicians' statements made on claims in connection with the following paragraphs of ODMC Letter No. 16-58:

- a. Paragraph 5a (1) covering emergencies
- b. Paragraph 8a (2) (a)2 covering acute surgical conditions

2. It has always been the policy of this office to rely upon the judgment and integrity of the cognizant medical authority (charge physician) in substantiating claims. In furtherance of this policy and in keeping with ODMC Letter No. 16-58, when the cognizant medical authority (charge physician) indicates on the claim form, or attachment thereto, that an acute or emergent medical or surgical condition existed which required prompt treatment in a hospital without delay, and if the care is furnished in compliance with the conditions outlined in ODMC Letter No. 16-58, *the claim, if otherwise complete, is payable without further reference to this office.* It is emphasized that the acute or emergent condition mentioned above must be of a medical or surgical nature—not socio economic.

3. The basic statement of the physician supporting a claim should be concise and should not be so qualified as to raise doubt as to the meaning of the basic statement itself. The types of statements required in support of claims involving emergencies and acute surgical conditions are described below:

a. *Statement Required in the Case of an Emergency Requiring Hospitalization*—The statement required in cases covered in paragraph 5a (1) of ODMC Letter No. 16-58 is: "The case was a bona fide acute emergency."

b. *Statement Required in Cases Involving Acute Surgical Conditions*—The diagnosis, on the claim form, or any separate statement or certification attached thereto, submitted by the charge physician, which *clearly states* that the conditions covered in paragraph 8a (2) (a)2 of ODMC Letter No. 16-58 prevailed, may be accepted. *For guidance only*, an acceptable certification is set forth below:

"An acute condition existed requiring hospitalization, without delays, for the purpose of carrying out surgery at the earliest practicable time."

4. Guidance was furnished previously on cases involving *acute medical conditions*. Set forth below, for ready reference, is paragraph 8b, ODMC Letter No. 16-58:

"The provisions of the Joint Directive pertaining to the treatment of acute medical conditions remain unchanged. (See Section 502a of the Joint Directive). However, in accordance with ODMC Letter No. 25-57, dated 24 December 1957, the admission of patients not acutely ill for diagnostic surveys will not be payable."

5. It is expected that a physician's diagnosis on the claim form or any separate statement or certification substantiating either an emergency, acute surgical condition, or acute medical condition, will be consistent with the clinical facts in the case.

6. In those unusual instances where the Fiscal Administrator has reason to believe that an inconsistency exists, the case, together with copies of pertinent hospital medical records, should be referred to this office for consideration.

7. *Assistance to Hospitals*—In paragraph 10, ODMC Letter No. 16-58, physicians were urgently requested to assist hospitals by furnishing to them information and statements necessary to properly substantiate hospital claims. The necessity for physicians' assistance must again be emphasized. Adjudication by the different Fiscal Administrators can best be achieved when the information supporting the separate claims (hospital and physician) is consistent.

It is the desire of Dr. F. J. Ryan, Chief Medical Officer of the Veterans Administration's Regional Office in Hartford, that all members of the Society be urged to submit their bills promptly for services rendered to VA beneficiaries.

Budget planning is disorganized by late billing and often results in delays in payments to physicians, says Dr. Ryan, and the cooperation of everyone concerned will be greatly appreciated.

Oral Treatment For Ringworm Reported

An antibiotic, which can be taken by mouth, has been found to be effective in the treatment of ringworm, according to two Florida dermatologists.

In a preliminary report in the current Archives of Dermatology, published by the American Medical Association, the doctors said they treated 31 patients with various types of ringworm with griseofulvin.

The drug is called griseofulvin for the species of Penicillium from which it is made. Penicillin is made from another species—notatum. Griseofulvin earlier was found effective against fungus infections in plants.

When griseofulvin was taken daily by mouth, ringworm of the body and scalp cleared within one to three weeks. Onychomycosis (ringworm of the nails) cleared within three to four months, they said.

This success suggests that "the systemic treatment of superficial fungus infections in man at last seems a near reality," the doctors said. There has been no standard treatment for fungus infections, but it has usually included keeping the area dry, and applying various chemicals.

Adverse side effects from griseofulvin appear to be minimal in man, they said. However, animal experiments indicate that griseofulvin affects the blood and the doctors recommended that regular blood cell counts be made during prolonged use of the drug in humans.

The duration of treatment required for the various fungi varies, apparently depending on the time required for normal replacement of the infected tissues.

In conclusion, the doctors said that fungus infections of various origin showed "a uniformly favorable response to oral therapy with griseofulvin." Even infections of 60 years duration responded. However, the chances of relapse or recurrence are still not known.

Doctors Harvey Blank and Frank J. Roth of the University of Miami School of Medicine, Miami, Fla., and the Veterans Administration Hospital, Coral Gables, Fla., were the authors.



why do I have CMS?

CMS has been a help to me for almost ten years. When I needed surgery and then later, while in the hospital for medical treatment, their payment for the doctor's services far exceeded the membership dues that I have paid during these ten years. Not everyone gets back more than they put in, but it is a welcome relief to have CMS standing by.

I will soon leave our enrolled group to retire, and it is a comfort to know that, through CMS, I will be able to continue my membership regardless of age, regardless of how many times I have needed to use it.



Connecticut Medical Service, Inc.

The Blue Shield Plan for Connecticut

GENERAL OFFICES • NEW HAVEN

Special Article

The Chronic Disease Program Of The Commission On Tuberculosis And Other Chronic Illness

A Report Of The First Year's Activity

ELIZABETH CORNFELD, M.D., M.P.H.

Hartford

1. WHAT IS THE COMMISSION'S PROGRAM?

As a result of passage of Public Act 586 by the 1957 Legislature, the Commission on Tuberculosis and Other Chronic Illness came into being on October 1, 1957, amalgamating the State Tuberculosis Commission and the Commission on the Care and Treatment of the Chronically Ill, Aged and Infirm. In addition to its program for tuberculosis, the new Commission was charged with the conduct of a chronic disease program to provide services for persons requiring rehabilitation, prolonged hospital care or intensive medical treatment for chronic illness other than tuberculosis. The hospital facilities then in use by the Commission for the treatment of chronic disease included Woodruff Hospital in New Haven, Uncas on Thames in Norwich, and Seaside Hospital in Waterford.

Woodruff Hospital had been opened by the Commission on the Chronically Ill, Aged and Infirm in April, 1955 as the first State-operated physical medicine and rehabilitation hospital in the nation. Recognizing the increasing need and importance of these specialized services, the new Commission undertook to strengthen and expand the program at Woodruff. There has been a steady

increase in the use of this facility, shown in the rise in the daily census of patients as personnel for their care could be secured, from 60 in October, 1957 to 84 at the end of the first year of operation by this Commission.

In November, 1956 certain segregated areas had been made available by the former Tuberculosis Commission at Uncas on Thames Sanatorium for the treatment of chronic diseases other than tuberculosis; admission was limited to clients of the State Welfare Department. In October, 1957 the program was broadened by legislative action to include any resident in the State; this resulted in an immediate rise in the daily patient census from 20 in 1957 to 77 in the Commission's first year.

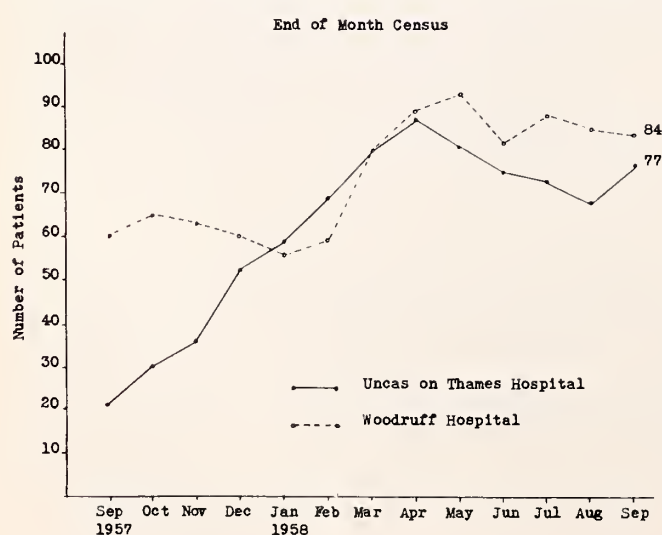
Because it was thought that facilities were needed in the State for the treatment of chronic diseases in children, such facilities had been provided at Seaside Sanatorium in June, 1957; however, since facilities for children became available elsewhere and since there developed virtually no demand for service, this program was discontinued.

It is the plan of this Commission to establish chronic disease units at Cedarcrest and Laurel Heights Hospitals as the need for beds for the care of the tuberculous diminishes. The present plan is to care for cancer patients as well as others at Uncas and to concentrate, as far as seems wise, special diagnostic and treatment skills and facilities in the several hospitals, retaining Woodruff for the present as the principal rehabilitation facility requiring its highly developed program of physical medicine.

Seaside Hospital has been returned to the State for other uses and the tuberculous children are being cared for at Uncas on Thames.

2. HOW IS ADMISSION TO A COMMISSION CHRONIC DISEASE HOSPITAL ARRANGED?

The patient's physician submits an application to the Commission's central office at 119 Ann Street, Hartford. Selection of suitable cases and



arrangements for admission are made by a medical team at the central office of the Commission.

The selection of patients for admission to Uncas on Thames or Woodruff Hospital is determined primarily by the needs of the patient. By and large, persons admitted to Woodruff Hospital are those who require and who can be expected to benefit from an active inpatient program of medical rehabilitation, while admission to Uncas on Thames Hospital is reserved for those who require prolonged active medical treatment in a hospital setting.

Since it is not always possible and often undesirable to separate rehabilitation and medical treatment in chronic disease, rehabilitation services are available at Uncas on Thames though to a limited extent. The staff at Woodruff Hospital is equipped to treat the medical problems encountered in its candidates for rehabilitation as well as those of a physical medicine program.

3. HOW MANY APPLIED FOR ENTRANCE INTO A COMMISSION HOSPITAL? (See Table 1)

There were 902 applications for admission received in the first year; of these 84.6 per cent were approved and 14.7 per cent were rejected; 0.7 per cent of the applications were withdrawn or failed to supply requested information needed to make a decision.

698 (77.4 per cent) of all applications resulted in admission of the patients; 65 (7.2 per cent) approved applicants did not accept hospitalization because of a change in condition or because they chose to make other arrangements for care.

TABLE 1 APPLICATIONS RECEIVED		
	NO.	PER CENT
Approved Applicants		
Not Admitted	65	7.2
Admitted	698*	77.4
Rejected	133	14.7
No Action	6	0.7
TOTALS	902	100.0

* 10 admissions occurred after September 30, 1958.

4. HOW MANY AND WHAT TYPES OF PERSONS WERE ADMITTED? (See Table 2)

There were 688 admissions to the chronic disease program in the first year of operation; 326 to Uncas on Thames and 361 to Woodruff. (The one patient admitted to Seaside will not figure in subsequent discussions. Similarly, an additional 20 admissions to New Britain Memorial Hospital, arranged under terms of a special contractual agreement, are not included.) 57.6 per cent of all admissions were male. The proportion of male ad-

missions to Uncas was slightly higher (60.7 per cent) and slightly lower at Woodruff (54.8 per cent).

The median age for persons admitted to Uncas and to Woodruff and for the group as a whole was 65 years. In other words, half of the admissions were under and half were over 65 years of age.

No marked difference can be detected between Uncas and Woodruff in the distribution of patients in the various age groupings. 30.3 per cent of all patients were between 60 and 69 years of age, 24.6 per cent were between 70 and 79 years of age, and 8.4 per cent were 80 or more years of age. Thus a substantial portion of our activity consisted in providing needed services to the aged chronically ill.

TABLE 2
ADMISSIONS: AGE AND SEX

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Under 40	26	7.9	33	9.1	59	8.6
40-59	84	25.8	109	30.2	193	28.1
60-69	99	30.4	109	30.2	208	30.3
70-79	83	25.5	86	23.9	169	24.6
80 and over	34	10.4	24	6.6	58	8.4
TOTALS	326	100.0	361	100.0	687	100.0
Male	198	60.7	198	54.8	396	57.6
Female	128	39.3	163	45.2	291	42.4
Median Age	65		65		65	

5. WHERE DID THE PATIENTS COME FROM? (See Tables 3 and 4)

Half of all patients (49.6 per cent) were admitted from their homes and 40.6 per cent came from other hospitals; a relatively small group came from convalescent hospitals (7.0 per cent) and other or unidentified facilities. Of those patients admitted from home, half were women and half were men; men predominated slightly over women in the group of patients admitted from other hospitals.

Considerably more patients were admitted to Uncas directly from home (59.5 per cent) than from other hospitals (34.1 per cent); among Woodruff admissions, 46.6 per cent came from hospitals and 40.7 per cent from home.

The high percentage of admissions to Woodruff from general hospitals is a reflection of the type of service Woodruff offers—rehabilitation of the individual after the general hospital has overcome the threat to life imposed by illness. In close proximity to two large hospitals and located in a metropolitan city, Woodruff is also readily accessible to patients in more distant hospitals and communities.

Approximately three-fourths of all the patients admitted to the chronic disease program were per-

sons living in New Haven and New London Counties, the locations of Woodruff and Uncas on Thames Hospitals respectively. As would be expected the bulk of the admissions to Uncas came from New London County (70.3 per cent), while the greater portion of Woodruff admissions came from New Haven County (63.2 per cent). However, both institutions drew patients from every county in the State.

TABLE 3
ADMISSIONS: SOURCE OF PATIENT

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Home	194	59.5	147	40.7	341	49.6
Hospital	111	34.1	168	46.6	279	40.6
Convalescent Hosp.	18	5.5	30	8.3	48	7.0
Other & Not Stated	3	.9	16	4.4	19	2.8
TOTALS	326	100.0	361	100.0	687	100.0
	MALE		FEMALE		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	
Home	194	49.0	147	50.6	341	
Hospital	173	43.7	106	36.4	279	
Convalescent Hosp.	22	5.6	26	8.9	48	
Other	7	1.7	12	4.1	19	
TOTALS	396	100.0	291	100.0	687	

TABLE 4
ADMISSIONS: RESIDENCE

COUNTY	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Fairfield	13	4.0	54	15.0	67	9.8
Hartford	21	6.4	34	9.4	55	8.0
Litchfield	1	.3	8	2.2	9	1.3
Middlesex	7	2.1	10	2.8	17	2.5
New Haven	33	10.2	228	63.2	261	38.0
New London	229	70.3	19	5.3	248	36.1
Tolland	6	1.8	1	.2	7	1.0
Windham	16	4.9	7	1.9	23	3.3
TOTALS	326	100.0	361	100.0	687	100.0

6. WHAT MEDICAL CONDITIONS WERE PRESENT ON ADMISSION? (See Table 5)

For each admission the primary or major diagnosis was recorded and where available, one secondary diagnosis. Among 687 admissions to the chronic disease program, 686 primary and 379 secondary diagnoses were reported. Most commonly encountered were disorders of the nervous system, the cardiovascular system, the musculo-skeletal system, and the respiratory system.

The most frequent single diagnoses were cerebrovascular accident 137, heart disease 111, pulmonary emphysema or fibrosis 59, amputations 56, diabetes 53, hip fractures 47, and arthritis 45.

Comparison of the diagnoses on admission to Uncas and Woodruff brings out the essential difference in the present programs of the two facilities.

Whereas 85 per cent of the admissions to Woodruff carried a diagnosis of nervous system or musculo-skeletal disease, these diagnoses appeared in only 25 per cent of the admissions to Uncas on Thames. Almost a third of the admissions to Uncas were cancer patients while only 1.9 per cent of the Woodruff admissions carried a diagnosis of cancer. Pulmonary conditions were well represented among admissions to both, but were almost three times as numerous among Uncas admissions (36.2 per cent) than at Woodruff Hospital (13.3 per cent).

TABLE 5
DIAGNOSES ON ADMISSION, PRIMARY AND SECONDARY*

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Neuropsychiatric	15	4.6	19	5.3	34	4.9
Cardiovascular	94	28.9	96	26.6	190	27.8
Nervous System	50	15.3	151	41.8	201	29.4
Respiratory	118	36.2	48	13.3	166	24.2
Gastrointestinal	19	5.8	25	6.9	44	6.4
Genitourinary	16	4.9	5	1.4	21	3.1
Musculo-skeletal	32	9.8	156	43.2	188	27.4
Sense Organs	....	....	1	.3	1	.1
Skin	7	2.1	6	1.7	13	1.9
Blood	6	1.8	2	.5	8	1.2
Allergic, Endocrine	47	14.4	45	12.5	92	13.4
Infective Parasitic	1	.3	3	.8	4	.5
Neoplastic	96	29.5	7	1.9	103	15.0
Not Stated	151	46.4	158	43.8	309	45.0
TOTALS	652	200.0	722	200.0	1374	200.0
	(326)		(361)		(687)	

* Where available one primary and one secondary diagnosis are recorded for each admission.

7. FOR WHAT REASONS DID PATIENTS COME TO OUR HOSPITALS? (See Table 6)

The basic difference between Uncas on Thames and Woodruff in their approach to chronic disease is again borne out in examination of the reasons for which patients were admitted. Uncas on Thames, in accordance with its primary function, provided intensive medical treatment and hospital care to 88.0 per cent of its admissions (diagnostic studies 8.9 per cent, specific treatment 58.9 per cent, and palliative care 20.2 per cent); on the other hand, the major portion of Woodruff admissions were for evaluation (11.6 per cent) and rehabilitation services (87.0 per cent). (Under "evaluation" are listed patients whose diagnoses may be quite evident, but who come to find out their capacity for improvement by skillful rehabilitation. Where favorable response is secured, life becomes more tolerable; the burden of care is re-

duced for the patient's family; and though time consuming and costly, the process of rehabilitation for a short period will reduce the overall cost to the State for long continued institutional care. It is not difficult to show substantial savings in many instances. By palliative care is meant treatment affording comfort or relief rather than cure or significant alteration in the course of a disease.)

TABLE 6
REASONS FOR ADMISSION

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Diagnosis	29	8.9	10	2.8	39	5.7
Evaluation	29	8.9	42	11.6	71	10.3
Palliative Care	66	20.2	2	.6	68	9.9
Rehabilitation	12	3.7	314	87.0	326	47.5
Specific Rx	192	58.9	21	5.8	213	31.0
Other	1	.3	.....	.....	1	.1
TOTALS	329	100.9	389	107.8	718	104.5
No. of Admissions	326		361		687	

8. HOW SICK WERE THE PATIENTS ON ADMISSION? (See Table 7)

Almost half (46.9 per cent) of the patients admitted to Uncas were in fair physical condition and another third (34.0 per cent) were seriously ill; the majority of admissions to Woodruff were in good (44.0 per cent) or fair condition (29.6 per cent).

This again demonstrates the essential difference between the two phases of the chronic disease program. At Uncas, the aim is to restore health or bring relief through intensive medical treatment; at Woodruff emphasis is on restoration of the individual to usefulness and independence (rehabilitation) by overcoming the incapacities and disabilities left by chronic disease or injury.

TABLE 7
CONDITION ON ADMISSION

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Good	42	12.9	159	44.0	201	29.3
Fair	153	46.9	107	29.6	260	37.9
Seriously Ill	111	34.0	10	2.8	121	17.6
Moribund	14	4.3	.....	.....	14	2.0
Not Stated	6	1.9	85	23.6	91	13.2
TOTALS	326	100.0	361	100.0	687	100.0

9. WHAT WAS EXPECTED TO BE ACCOMPLISHED BY ADMISSION? (See Table 8)

Approximately half of the admissions to Uncas and Woodruff were expected to achieve partial or full recovery at both Uncas and Woodruff. Full or

partial rehabilitation was expected for 72 per cent of the Woodruff patients at the time of admission.

TABLE 8
PROGNOSIS ON ADMISSION

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Recovery						
Full	25	7.7	32	8.9	57	8.3
Partial	146	44.8	155	42.9	301	43.8
None	93	28.5	7	1.9	100	14.6
Not Stated	62	19.0	167	46.3	229	33.3
TOTALS	326	100.0	361	100.0	687	100.0
Rehabilitation						
Full	6	1.8	55	15.2	61	8.9
Partial	25	7.7	205	56.8	230	33.5
Minimal	19	5.8	20	5.5	39	5.7
None	27	8.3	2	.6	29	4.2
Not Stated	249	76.4	79	21.9	328	47.7
TOTALS	326	100.0	361	100.0	687	100.0

10. HOW MANY PATIENTS WERE DISCHARGED AND IN WHAT CONDITION DID THEY LEAVE? (See Table 9)

At the end of the first year of the chronic disease program, there were 607 discharges; 44.6 per cent were from Uncas and 55.4 per cent from Woodruff.

82.7 per cent of the patients left the hospitals alive; the majority (66.8 per cent) were cured or improved while 14.5 per cent were unimproved.

105 patients (or 17.3 per cent of all discharges) died.

Since patients admitted to Woodruff Hospital for rehabilitation are generally in good physical condition, aside from the presence of a physical disability, it is not surprising to find that only 5 patients died.

Uncas on Thames, an active treatment hospital which admits a high proportion of seriously ill, older persons, had a mortality of 36.9 per cent.

TABLE 9
CONDITION ON DISCHARGE

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Discharges						
Cured	19	7.0	24	7.1	43	7.1
Improved	116	42.9	246	73.2	362	59.7
Unimproved	28	10.3	52	15.5	80	13.2
Worse	3	1.1	5	1.5	8	1.3
Not Stated	5	1.8	4	1.2	9	1.4
TOTALS	171	63.1	331	98.5	502	82.7
Deaths	100	36.9	5	1.5	105	17.3
TOTALS	271	100.0	336	100.0	607	100.0

11. WHAT KIND OF SERVICES DID PATIENTS RECEIVE?
(See Table 10)

The overwhelming majority (98.5 per cent) of the 502 patients who left the hospital alive received services of a definitive nature such as diagnostic study or evaluation, rehabilitation or specific medical or surgical treatment; only 4.3 per cent received palliative care. (Since some of the patients were reported as having received more than one major service, the sum total of services rendered exceeds 100 per cent.) As has been demonstrated previously, the major service rendered by Woodruff Hospital was in the area of rehabilitation while that of Uncas on Thames was diagnostic study and specific therapy.

In sharp contrast, palliative care was the chief service (45.7 per cent) rendered those who expired although specific medical and surgical therapy was also provided for a substantial number of these patients (44.8 per cent).

TABLE 10
SERVICES RENDERED TO PATIENTS
LIVE DISCHARGES (502)

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Diagnosis & Eval.	34	19.9	21	6.3	55	11.0
Palliation	12	7.0	1	.3	13	2.6
Rehabilitation	3	1.7	274	82.8	277	55.2
Surgery	22	12.9	1	.3	23	4.6
Specific/Medical	101	59.1	38	11.5	139	27.7
None	....	.....	9	2.7	9	1.7
TOTALS*	172	100.6	344	103.9	516	102.8
No. Discharges	171		331		502	
DEATHS (105)						
	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Diagnosis & Eval.	4	4.0	1	20.0	5	4.7
Palliation	48	48.0	....	.....	48	45.7
Rehabilitation	1	1.0	1	20.0	2	1.9
Surgery	7	7.0	....	.....	7	6.7
Specific/Medical	36	36.0	4	80.0	40	38.1
None	6	6.0	....	.....	6	5.7
TOTALS*	102	102.0	6	120.0	108	102.8
No. of Deaths	100		5		105	

* More than one service reported for some patients.

12. WHERE DID PATIENTS GO WHEN THEY LEFT THE HOSPITAL? (See Table 11)

Eighty per cent of all patients who left the hospital alive were able to return to their homes; only 6.4 per cent of the patients required additional treatment in general hospitals; in this respect it will be noted that Woodruff Hospital, which is not as well prepared to handle general medical and surgical problems, discharged slightly more of its

patients (7.5 per cent) to general hospitals than did Uncas with 4.1 per cent discharges to such facilities.

TABLE 11
DESTINATION OF LIVE DISCHARGES

	UNCAS		WOODRUFF		TOTAL	
	NO.	PER CENT	NO.	PER CENT	NO.	PER CENT
Home	137	80.1	264	79.8	401	79.9
Hospital	7	4.1	25	7.5	32	6.4
Conv. Hospital	14	8.2	34	10.3	48	9.6
Mental Hospital	12	7.0	5	1.5	17	3.4
Other	1	.6	3	.9	4	.7
TOTALS	171	100.0	331	100.0	502	100.0

13. HOW LONG WERE PATIENTS HOSPITALIZED? (See Table 12)

The patients representing 607 discharges were hospitalized for a total of 40,444 days (15,112 days at Uncas and 25,332 days at Woodruff). The average length of stay at Uncas was, therefore, 55.8 days per patient and 75.4 days at Woodruff, or 66.6 days for the combined group.

The average length of stay for the live discharges from Uncas was 47.7 days which is considerably shorter than the 69.5 days calculated for those patients who died.

At Woodruff the number of deaths (5) is too small to permit comparison with the 331 live discharges.

Examination of the length of hospital stay in terms of the median number of days reveals a striking uniformity in the length of stay of patients at Uncas for both live and dead discharges (33 and

TABLE 12
HOSPITAL STAY IN HOSPITAL DAYS

	UNCAS	WOODRUFF	TOTAL
Total Days			
Live Discharges	8,159	25,169	33,328
Dead Discharges	6,953	163	7,116
TOTALS	15,112	25,332	40,444
Mean Hospital Days			
Live Discharges	47.7 days	76.0 days	66.4 days
Dead Discharges	69.5	32.6	67.8
ALL DISCHARGES	55.8	75.4	66.6
Median Hospital Days			
Live Discharges	33 days	65 days	55 days
Dead Discharges	36	64	34
ALL DISCHARGES	33	64	52
No. of Patients			
Live Discharges	171	331	502
Dead Discharges	100	5	105
TOTALS	271	336	607

36 respectively). Shown also is a greater divergence in the duration of stay between Uncas discharges (33 days) and Woodruff discharges (64 days) than is apparent in study of the mean hospital stay.

14. WHAT WAS THE CAUSE OF DEATH FOR THOSE WHO DIED? (See Table 13)

In the 5 deaths which occurred at Woodruff, the primary diagnosis for each was cardiac disease. The secondary diagnoses reported for 2 cases were amputation and cerebral vascular accident.

Further consideration will be limited to the 100 deaths recorded at Uncas and for which 100 primary and 56 secondary diagnoses were reported.

Neoplastic disease was the most frequently mentioned diagnosis, occurring in 57 of the patients who died. The most prominently mentioned sites were lung 16, uterus 7, and intestines 6.

Second in frequency among the deaths was cardiovascular disease in 47 patients, 20 of whom were described as having had arteriosclerotic heart disease and 10 some other form of heart disease.

Cerebrovascular accident and respiratory disease, each reported for 14 patients, shared third place in the list of diagnoses.

If one excludes respiratory disease from consideration it will be seen that the order of diagnoses on admission to Uncas (respiratory 36.2 per cent, cancer 29.5 per cent, cardiovascular 28.9 per cent, nervous system 15.3 per cent) parallels the order of diagnostic categories among deaths (cancer 57 per cent, cardiovascular 47 per cent, nervous system 15 per cent).

TABLE 13
DIAGNOSES OF THOSE WHO DIED AT UNCAS ON THAMES

DIAGNOSES	PRIMARY	SECONDARY	TOTAL	
			NO.	PER CENT
Neoplasms	51	6	57	57
Cardiovascular	23	24	47	47
(Cardiac)	(17)	(13)	(30)	(30)
(Vascular)	(6)	(11)	(17)	(17)
Nervous System	10	5	15	15
(C. V. A.)	(10)	(4)	(14)	(14)
(Other)	....	(1)	(1)	(1)
Respiratory	6	8	14	14
Genito-urinary	5	6	11	11
Gastro-intestinal	3	2	5	5
Endocrine	....	4	4	4
Other	2	1	3	3
Not Stated	....	44	44	44
TOTALS	100	100	200	200

15. HOW OLD WERE THOSE WHO DIED?

Whereas 54.9 per cent of the admissions were between the ages of 60 and 79 years, 64 per cent of the deaths occurred in this age group. Twelve

per cent of the persons who died were 80 years of age or older while only 8.4 per cent of the admissions fell into this age category.

16. WHAT TYPE OF PATIENT WAS REFUSED ADMISSION TO THE CHRONIC DISEASE PROGRAM? (See Table 14)

Under the terms of Public Act 586, 1957 Session, the Commission is charged with the responsibility of providing care for "conditions other than tuberculosis which require prolonged hospital or restorative care as distinguished from conditions or diseases which may be properly cared for in convalescent, custodial or domiciliary facilities."

TABLE 14
REASONS FOR REJECTION OF APPLICATIONS (133)

REASON	NO.	PER CENT
Not suitable for rehabilitation	51	38.3
Outpatient rehabilitation sufficient	8	6.0
Convalescent hospital care sufficient	57	42.9
Home substitute needed	10	7.5
Needed service not available at Commission facilities	3	2.3
Other	4	3.0
TOTALS	133	100.0

One hundred and thirty-three applicants did not meet these criteria for admission to the Commission's chronic disease facilities. Half the patients were between 60 and 79 years of age, while an additional fourth were 80 years of age and over. Women predominated slightly (51.9 per cent) over men. The majority of patients were at home (42.9 per cent) or in general hospitals (27.1 per cent) at the time of application. Almost a third were in convalescent hospitals or other locations.

38.3 per cent patients were rejected because it was felt that they could not benefit from rehabilitation; in an additional 6.0 per cent of the cases the needs for rehabilitation were such that service could be adequately, and more economically, obtained on an outpatient basis. Half of the patients were refused admission because they did not require medical treatment or hospital care; for this group of patients, the application review staff felt that 42.9 per cent could be adequately cared for in convalescent hospitals and an additional 7.5 per cent at home or in a home substitute.

As in the case of persons admitted to our facilities, the most frequently encountered diagnoses were neurological disorders, cardiovascular disease and musculo-skeletal disorders.

Cancer was recorded as a secondary diagnosis for three applicants. Two of these applied for custodial or convalescent care for healing fractures;

in both of these cases the neoplastic disease had been treated surgically in the past and was unrelated to the need for care at the time of application. In the third instance the primary need was custodial care for advanced Parkinson's Disease and, secondarily, investigation to rule out brain tumor; this patient was rejected because it was felt our institutions were not well enough equipped to carry out the specialized neurological investigation this patient required.

Multiple sclerosis, Parkinson's Disease and degenerative neurological disorders were recorded for 30 applicants. The major need for this group, though variously stated, was actually long-term supervisory or domiciliary care.

Of the six applications which were not acted upon, four were withdrawn and two applicants failed to supply requested additional information needed to arrive at a decision regarding eligibility for admission.

17. WHAT HAS BEEN ACCOMPLISHED BY THE CHRONIC DISEASE PROGRAM?

In the first year of operation, the chronic disease program provided service and care to more than 600 persons. Some were cured, many were substantially improved, many learned to overcome and live within the limitations imposed by severe physical disabilities, while some received relief of symptoms and comfort in the days preceding death.

Important as the service and care may be to these specific individuals and their families, the major accomplishment of the Commission has been intelligent planning, creation and execution of a successful program. The holding together of highly qualified hospital units and staffs, and reorientation and remolding of personnel to new concepts of disease and treatment, have made possible an orderly and progressive transition in the utilization of beds no longer needed for the treatment of the tuberculous.

The greater availability of beds in tuberculosis hospitals and the expanding demand for the care of other chronic diseases were the major topics of discussion at a conference arranged and held by the Commission at Cedarcrest Hospital on November 14, 1958. In attendance were public health specialists in the fields of tuberculosis, chronic disease and rehabilitation from Connecticut, New York, New Jersey, Massachusetts and the U. S. Public Health Service, Washington, D. C. Frank and open discussion of these two problems by these public health leaders made it clear that Connecticut is well in the forefront by virtue of its present program of chronic disease and rehabilitation and its blue print for expansion to meet the increasing demand for chronic disease facilities. The shortage of skilled personnel of all types, but primarily of nurses, has been a great problem in the past and will pose a major threat to expansion in the future.

Susceptibility to Atherosclerosis

"The interplay between genetic and environmental factors determines the susceptibility to atherosclerosis," according to Drs. David Aldersberg and Louis E. Schaeffer. "This pertains to population groups and to individuals within population groups."

Some investigators associate hypercholesteremia—with or without atherosclerosis but excluding xanthomatosis—with the heterozygous quality of the gene, while asserting that much higher serum cholesterol levels leading to xanthomatosis and frequent atherosclerosis are results of the homozygous state of the gene. Others suggest that all these signs are caused by the heterozygous character of the gene.

Studies of the authors "seem to support the concept that the genetic component involved in the determination of serum lipid levels is a dominant gene with incomplete penetrance."

However, genetic determination of serum lipids does not exclude the influence of environment on their levels. Extensive study has shown that diet, particularly fat and protein, influences the serum cholesterol level and therefore probably affects the course of arterial disease. Support has been given to such matters as ethnic origin, occupation, stress, exercise, tobacco, and consumption of alcohol as factors in determination of circulating cholesterol and lipoprotein levels. The mechanism linking the genetically determined enzymatic chain reactions with environmental influences may be the endocrine system.

It appears plausible that when environmental influences are sufficiently powerful they are capable of mitigating or even nullifying the genetic predisposition to coronary artery disease. In fact, studies of the Japanese, the Yemenites, and the rural Bantus and Guatemalans lend credence to this concept. (*Am. J. Med.* 36:1, January, 1959.)

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News From Washington

Draft Bill Voted With Extra Pay For Doctors

Rushed through to passage and transmittal to President Eisenhower for certain approval was HR 2260, extending draft law four more years. Included was an amendment, inserted by Senate and indorsed by House, which assures continuation of special pay for medical, dental and veterinary officers. Had this section not been adopted, those entering upon active duty July 1, 1959, and later would have been ineligible for this benefit. For medical and dental personnel, it ranges from \$100 to \$250 monthly, depending on length of service. A flat \$100 monthly is received by Army and Air Force veterinarians.

Reports Disclose Sums Spent For '58 Lobbying

In reports filed with House and Senate, AMA said it spent \$51,676 last year to influence national legislation. American Dental Assn. reported expenditures at \$40,232. Other declarations included the following (though it should be explained that these financial reports give only a clue to actual expenditures for lobbying in Washington):

American Hospital Assn., \$42,981; American Cancer Society, \$30,045; American Nurses Assn., \$24,483; American Optometric Assn., \$11,690; Association of American Medical Colleges, \$9,166; Arthritis and Rheumatism Foundation, \$4,868; American Osteopathic Assn., \$2,047; Association of American Physicians and Surgeons, \$1,500, and American Veterinary Medical Assn., \$1,966.

Medicare HQ. Hits Delay In Physicians' Billings

Volume of long-delayed claims for payment of Medicare bills has reached point where the government is appealing to physicians and hospitals to expedite billings. Sixty per cent of the claims for payment reach Washington within three months after completion of services. Remainder take up to two years, even longer, to come in. Medicare headquarters still receives bills that go back to the program's inception in December, 1956.

A directive circulated notes that prompt billings, besides simplifying the bookkeeping, are required for preparation of budgetary requests and other statistical needs. It urges doctors and hospitals to obtain all necessary information at time of patient's first visit. By forwarding claims as soon as care is terminated, complications resulting from misplaced records are minimized, directive points out.

Diabetes Testing Begun By USPHS In Virgin Islands

Public Health Service has launched a diabetes screening program in the Virgin Islands which aims to cover entire population over age of 15. Hewson Clinotron, which has a capacity of 120 tests per hour, is being used. Positives will be referred to their physicians or to insular health department hospitals for confirmative diagnosis.

AMA Tells Congress How Care Of Aging Is Going

Through its trustee chairman, Dr. Leonard W. Larson, AMA has filed a detailed report with House Ways and Means Committee on numerous steps being taken to elevate health standards of the aging population. The past four months have witnessed solid progress in provision of better health insurance for senior citizens and reduction of fees for their medical care, the committee was informed. It is this committee which has under consideration the disputed Forand bill (HR 4700).

FAA Starting "Get Tough" Role In Aeromed Rulings

Federal Aviation Agency will propose first set of regulations in its new policy of stricter supervision of civil air safety. In this initial step, FAA would make diabetes controlled with insulin, history of heart disease and psychoses disqualifiable for pilot certification. Comments and suggestions by interested parties will be accepted by FAA.

If this tightening of regulations finally is adopted, veto power of Civil Aeronautics Board would be limited to contesting accuracy of diagnoses, in the opinion of Federal lawyers. They say CAB could not override FAA rejections of flying certificates which were based on unchallenged medical opinion, though this question may go to the courts before it is ultimately settled.

House Clears Keogh Bill And Sends It To Senate

Keogh-Simpson bill (HR 10) is now on docket of Senate Finance Committee, having passed House by voice vote recently. It is unlikely the committee will make haste to consider this retirement bill because of (1) its current involvement with insurance and unemployment compensation legislation; (2) volubility of Administration objectors, and (3) fact that Committee Chairman Harry F. Byrd (D., Va.) is no more kindly disposed to HR 10 now than he was last year, when the bill expired on his shelf after it had been passed by the House.

Schottland Sees Early Passage Of Forand Bill

Charles L. Schottland, former Commissioner of Social Security, predicts Forand bill or comparable plan of Federal medical insurance will be enacted in near future. Addressing Physicians Forum in New York, Scotland said provision of medical benefits through social security payroll tax is feasible.

Senate Committee Issues World Report On Diseases

The Senate subcommittee which is conducting a factual study of world health has issued third in series of reports. It is a text-and-map summary of global distribution of communicable diseases, regional mortality rates and description of health resources throughout the world. While this work bears a \$1.25 price tag, WRMS has a limited number of free copies for readers requesting them.

"No country has done more on behalf of human health throughout the world . . . than has the United States," said Senator H. H. Humphrey, subcommittee chairman. "But no country faces a greater obligation or responsibility to do still more."

AEC Grants \$316,717 More For Atomedicine Training

Atomic Energy Commission has approved an additional \$316,717 in awards to institutions of higher learning to support purchase of equipment for training in nuclear technology as applied to life sciences. Recipients of latest awards include medical schools and veterinary colleges. Since this program was begun in October, 1957, 152 grants totaling \$1,810,707 have gone to 110 institutions.

Another group of awards will be announced in June. Colleges, universities and professional schools may obtain information on participation by writing Director, Div. of Biology and Medicine, U. S. Atomic Energy Commission, Washington 25, D. C.

Hearings On Radiation Hazards End At Capitol

Two weeks of open hearings on employe radiation hazards and workmen's compensation were concluded recently by research and development subcommittee of Joint Congressional Committee on Atomic Energy. Through direct statements and interrogation, expert witnesses presented the most enlightening information to date on problems growing out of increased utilization of radioactive materials in industry and the health sciences. Organized labor stressed need for centering in Washington the responsibility for atomic safety and health programs instead of "farming it out to the States."

Law Changes Advocated

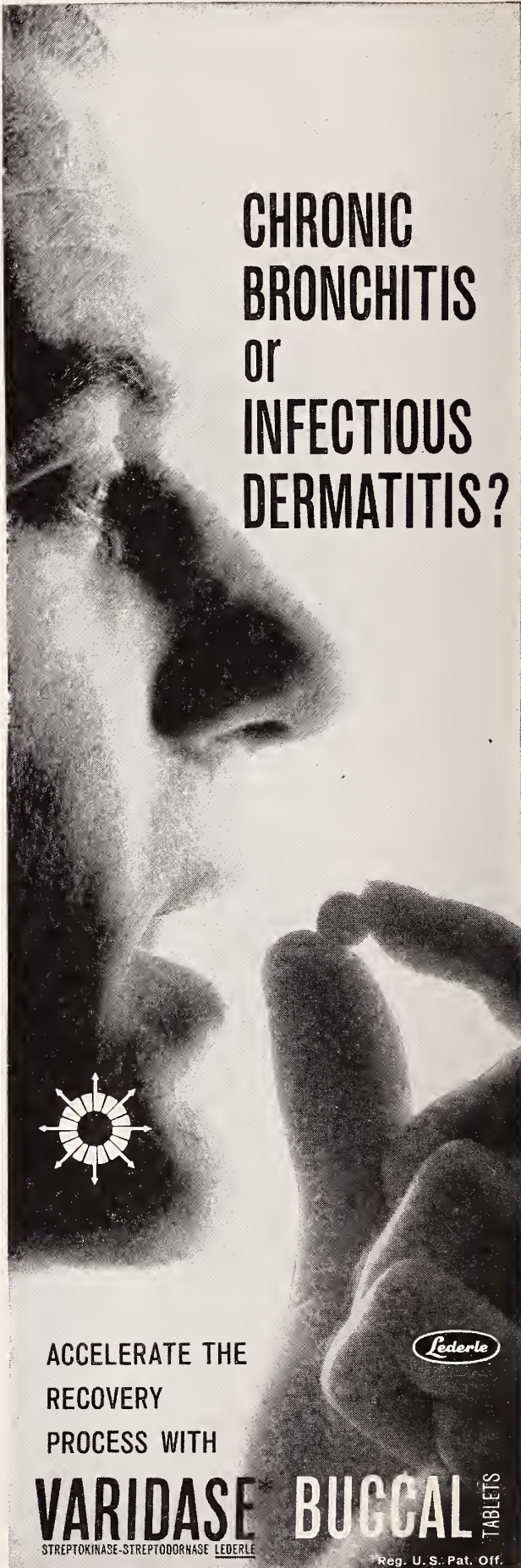
Dr. Herbert K. Abrams of Chicago, medical consultant to Chemical Workers Union (AFL-CIO), offered these recommendations, among others: Unlimited medical benefits, including rehabilitation, for injured workers; supervision of workmen's compensation medical care by "impartial medical authorities;" because of its character, radiation injury cases should never be considered permanently closed.

American Hospital Assn. filed a statement noting that about 2,000 U. S. institutions are now licensed for use of radioisotopes for medical purposes and hospitals are taking all known precautions for safety of everyone associated with their handling and use.

Medical research reactor at AEC's Brookhaven National Laboratory achieved criticality in March. One of its main uses will be for therapy of glioblastoma multiforme. First to be designed exclusively for medical uses, the reactor is hub of Brookhaven's new medical center, which includes a 48-bed hospital.

Report Shows Extent Of Health Course Activity

Public Health Service report discloses that its Bureau of State Services conducted or cooperated in 173 courses and 40 technical seminars last year with a total of 19,000 participants. Fifty-two per cent came from state and local agencies and remainder were college students and teachers, workers in industry, Federal employes, foreign enrollees and others. Courses and seminars lasted from one day to a month or longer. Information on 1959 training program is obtainable by writing BSS, Public Health Service, Room 5022 South Bldg., Dept. of HEW, Washington 25, D. C.



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Letters To The Editor

Bridgeport, Connecticut
March 13, 1959

Dear Dr. Nahum:

I wish to congratulate you and your editorial staff, for the excellent articles that appear, particularly in the January 1959 issue. The editorials are indeed excellent, the one called "Colitis—Iatrogenic disorder" is indeed most stimulating. Also, the article on "Heart patients can work" is indeed a very intelligent and practical article. The reason that many heart patients cannot work is also due to an iatrogenic factor.

As a neurologist and psychiatrist, I was particularly thrilled by Dr. Koskoff's article as well as the one on "The Irritable Bowel." The article on "Liver Necrosis after Iproniazid Therapy," is well worth while. Unfortunately, they should have reviewed some the literature which indicates that there have been innumerable deaths. If I recall correctly, Mt. Sinai Hospital itself, has had 6 or 8 cases of toxic jaundice from this drug. Because it is now being universally used by everyone, I regret to say that too few have paid attention to the letters that have been sent out by the manufacturer, indicating its toxic side effects. We psychiatrists, are also at fault because of the articles that have repeatedly been written, indicating that it is one of the excellent energizers. This is true, but unfortunately, it is a very slow acting drug and often a patient in a depression, may commit suicide before the drug takes effect. Furthermore, another complication which has not been mentioned often enough, is the fact that it is very easy to throw a depressed patient who is a manic depressive, into a manic phase and thus become uncontrollable. I have had two such cases in my own practice. I was relying on the clinical papers and judgment of my peers, when I used the drug as prescribed in individuals whom I had previously given shock therapy to for their depressive episodes. Unfortunately, both of these very intelligent individuals have been in institutions for treatment of the manic states induced by Marsilid. I can also say that I too, have produced an "iatrogenic" disorder through the use of Marsilid in these two individuals. I previously treated them for depressions with Electro Coma therapy and it would have taken only four to six treatments or one or two weeks, to have brought about a state of normalcy.

Kline and Robey have been much too enthusiastic, as far as I am concerned, about their presentation of the beneficial effects of energizers. Since there is such a long time factor involved, it is difficult to understand how we can allow a patient to suffer from one to two months, when their depressive illness could be very rapidly terminated in two or three weeks. There is a tremendous loss of time, as well as employability. The depressions, as you know, are very hazardous to treat on an ambulatory basis, because the suicidal rate is so high. They obviously do not respond except in rare cases, to psychotherapy.

May I congratulate you and your Board again, for the very excellent scientific articles that have been appearing in your Journal.

Sincerely yours,

Harold Ribner, M.D.

West Hartford 7, Conn.
April 7, 1959

Dear Doctor Nahum:

"Tell me your counsels. I will not disclose 'em:
I have made strong proof of my constancy,
Giving myself a voluntary wound
Here, on my thigh; Can I bear that with patience,
and not my husband's secrets?"

Julius Caesar, Act ii, Scene i.

Recently, at a reception, I was asked by a lady in her sixties, why it is that modern physicians seem increasingly to disregard that part of the Hippocratic oath which enjoins secrecy concerning information acquired in the course of treating a patient.

She told me that her married daughter had brought her straight from the bridge table, medical information which she knew about the patient, who was a friend of hers would not wish to have broadcast. "It must be so" she added, "for the wife of the surgeon told us."

"Now I am sure," added the mother, "that men of your generation were not such gossips, or if you did confide in your wives, they, like Portia, knew how to keep their husbands' secrets."

"The sad part of it is that my daughter will not again consult that surgeon, though both of us have the highest regard for him."

I got to wondering if this is really so and if so, why? True, we didn't have Women's Auxiliaries four or five decades ago, but bridge was played. I have wondered if some of the following factors have not been operative.

The young physician used to look forward to making a living at private practice. The pattern was usually that of solo practice. This led him to be close mouthed.

In our apprentice days as internes and later as assistants we gained our experience on the wards and only later came in contact with private patients. Since social contacts were apt to be less close than with private patients, the effects of idle gossip or of the more serious discussion of a "case" were seldom noticeable.

Modern medicine with all its complexities, calls for many individuals on the medical team. Indeed many a patient who is in the public eye, hesitates to enter a hospital and be sick "in a goldfish bowl" except under an assumed name.

It is inevitable that a patient's innermost workings will be known to many more people than formerly, but it is seldom necessary for the doctor's wife to be one of them. If she is, she must be constantly aware of the harm she can do her husband by even admitting that she knows anything about a given patient.

Many physicians are married while still in medical school and hospitals. The wife is accustomed to hear him discuss with enthusiasm his problem cases and I wonder if she does not occasionally forget how private some of this information is in the mind of the patient. I wonder too if her husband is not chiefly to blame. Some doctors can be terrible gossips.

Very truly yours,

JAMES R. MILLER, M.D.

Book Reviews

THE BIRTH OF NORMAL BABIES. By Lyon P. Stream, Ph.D., D.D.S., F.A.P.H.A. T. Wayne Publishers, New York, New York. 194 pp. \$3.95.

Reviewed by DENIS S. O'CONNOR

The reviewer would find it difficult to understand why a dental surgeon would publish a work on this subject were it not for the fact that so many of the cases cited in this book were cleft palate deformities.

It is apparent that the author's interest in the possible causes of cleft palate has led him to a greater interest in all the congenital deformities.

The author feels that traumatic physiological or emotional stress occurring at a particular point in the scheduled development in the embryo especially the first trimester can explain the various congenital deformities.

Unquestionably there is much truth to his claims and the case which is made out for individuals should be proved statistically.

Presumably this book is written for the laity and while in the hands of the highly educated and mentally stable mother or the social counselor this book could be valuable, one must also remember that realization of the possible defects with which children may be born could only result in serious emotional stress on the part of the expectant mother were she to read the case histories in this book.

The ten commandments of Genesis which the author lists have much to recommend them and might well be kept in mind by all obstetricians and others who are called upon to advise expectant mothers.

This book is easy reading and could be useful to anyone in the medical, nursing, or social services whose position requires them to advise expectant mothers.

THE YEAR BOOK OF MEDICINE, 1958-1959 Book Series. The Year Book Publishers, 200 East Illinois Street, Chicago, Illinois. 782 pp. \$7.50.

Reviewed by LOUIS H. NAHUM

Without the help of this book it would be almost impossible to keep abreast of what is happening in the field of infections, in diseases of the chest, in the field of diseases of blood and blood forming organs, in the area of the Heart, blood vessel, and kidney disease, in diseases of the gastrointestinal tract and in metabolism.

Each section is edited skillfully and authoritatively so that the reader receives the benefit of mature and experienced choice of articles and sometimes comments by such outstanding editors as Beeson, Muschenheim, Castle, Harrison, Ingelfinger and Bondy. Thanks to the prolific publication of innumerable communications there are always available enough articles each year to point up all new thoughts and treatments in the fields covered. New virus diseases, control of hospital infections, value of new antibiotics, new theories in vascular degeneration, inborn errors of metabolism and many other new developments in medicine will be found in this volume. A busy medical man can be educated and remain so by having recourse to this volume. An extensive index makes easy the reference to any desired subject.

CIBA FOUNDATION SYMPOSIUM ON AMINO ACIDS AND PEPTIDES WITH ANTIMETABOLIC ACTIVITY. Edited by G. E. W. Wolstenholme and Cecelia M. O'Connor. \$8.75.

Reviewed by WILLARD A. KREHL

This international symposium deals with the chemical, biochemical, biological or clinical properties of amino acids and peptide derivatives of amino acids. Intriguing is the concept that a chemical substance can have its molecular anatomy tailor made to exert a specific activity. The ultimate goal is to develop compounds which will have a structure-activity relationship that will halt cellular activity at the desired level. It is evident from the reports of this symposium that only the surface has been probed in understanding the mechanism of action of many drugs as a function of their structure. Nevertheless important contributions have been made. It is evident from the discussions that we know far too little about the differences in all metabolism of the cancerous and the normal state—this despite very intensive work in many laboratories. Because of this we have not pressed forward very far in cancer therapy via chemicals as we have in the treatment of bacterial diseases.

A few of the outstanding contributions are those of Buchanan on the interference of azaserine in purine biosynthesis, Craig on bacitracin, Farber on clinical and biological studies with actinomycins, Reilly on some aspects of azaserine, 6-diazo-5 oxo-L-Norleucine on B-2 thienylalanine, Sheehan on the chemistry of etamycin and Skipper on a preliminary study of the influence of amino acid deficiencies on experimental cancer chemotherapy.

Recommended for those interested in this most interesting field of study of cellular activity through molecular manipulations.

"THE PLASMA PROTEINS"—Clinical Significance. By Paul G. Weil, M.D., Ph.D. J. B. Lippincott Company, Philadelphia, Pennsylvania. 133 pp. \$3.50.

Reviewed by DENIS S. O'CONNOR

This book, one of the so-aptly called Practitioners' Pocket Book Series, should be in the pocket of any practitioner whether he be a specialist or a generalist, a surgeon or a physician. The content is "all meat"—no padding! It is presented in clear, easily understood language. It should, of course, be read once although repeated readings could do much to make the contents an integral part of one's clinical medical equipment. But so voluminous is the material of practical value in the interpretation of laboratory procedures in relation to the clinical picture of almost every problem case, that this little book should always be at hand at the bedside and in the office to refine the practitioner's understanding of his findings.

It the recent recommendation of Dr. Gunnar Gunderson, President of the A.M.A., that doctors be obliged to constantly study the developments in medicine, it will be books of this type in format, content and presentation which will be the basic source of doctor's education.

For doctors long out of medical school this book is a must if they would understand current medical articles of basic physiologic importance. For the younger men who in their medical studies have been exposed to some of the new developments in plasma analysis, this little book could well make their prescription of laboratory procedures more intelligent and their interpretation of laboratory tests more accurate.

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Around The State

Fairfield County

William B. Terhune, medical director of the Silver Hill Foundation spoke before two medical groups in Columbus, Ohio recently.

Franklin S. DuBois, associate medical director of the Silver Hill Foundation, discussed the adolescents' role in today's living at a joint meeting of the Community Clinic Committee of the Foundation recently.

In a matter referred to it by the Board of Censors, the Board of Trustees, has recorded its position on so-called multiple telephone directory listings by physicians in the yellow pages.

The Board of Trustees, the resolution reads, considers it improper for any member to insert or retain a paid yellow page listing in a telephone book other than the one in use in the community in which he maintains an office or residence or in an area served by a hospital in which the physician holds an appointment.

The Board was informed that it was the practice of the telephone company to provide a physician or business establishment with one cost-free yellow page listing but that a charge is made for any additional yellow page listing in books applicable to other areas. The multiple listing practice has been described as not uncommon in Fairfield County.

The position of the Board on this matter is to be made known in a reply to an inquiry made by a nearby medical society situated in this state but out of Fairfield County.

New Haven County

Ira S. Goldenberg, assistant professor of surgery at the Yale School of Medicine, has been elected a member of the Society of University Surgeons.

C. Lee Buxton, chairman of the Department of Obstetrics and Gynecology at the Yale School of Medicine was inducted as president of the American Society for the Study of Sterility at the society's annual conference at Atlantic City held in April.

Carl E. Johnson, associate clinical professor of obstetrics and gynecology will be the new treasurer, and Luigi Mastroianni, an assistant professor, was chairman of the arrangements committee.

A glaucoma screening for New Haven area residents was held at the Hillhouse High on April 7th. Area residents forty years of age and older were invited to take advantage of the free screening, designed to uncover early cases. This public service was given by the ophthalmologists of the New Haven area, under the direction of the Connecticut Chapter for the Prevention of Blindness.

Joseph Weiner has returned from San Francisco where the 15th annual convention of the American College of Allergists was held. Dr. Weiner attended the post graduate instructional course and the scientific meetings and participated in the discussion of the pediatrics-allergy section.

The New Haven County Medical Association held its 175th Annual Meeting at the Waverly Inn March 26th, Dr. Clyde Deming presiding. With a membership of 886 the association is larger than ever before. Although the business agenda occupied over four hours, the subjects were of



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consuming topical interest and lively discussion continued throughout. At the close of business the ladies of the auxiliary lent their presence to a cocktail interval, followed by dinner and the president's introduction of new members. Dancing was scheduled till twelve.

In a brief address Dr. William Richards stressed the unique opportunities of practitioners, as individuals at the grass-roots level, to foster a favorable public attitude toward the medical profession. Dr. Thomas Feeney, Chairman of the State Council, talked in the same vein. He described misunderstandings encountered among lawmakers in the general assembly on medical matters, pleading for better professional cooperation in correcting them. So far as C.M.S. is concerned the laymen on its Board of Directors are more understanding and sympathetic toward the doctors' viewpoint than formerly. This represents a substantial accomplishment.

Dr. Stanley Osborn informed the audience of proposals under consideration in Hartford which, if effected, are to substantially alter the organization of our State health services. In line with economy trends Dr. Osborn asked physicians to temper requests for free biologicals from the State Health Department with discretion. Requests should be made only for those individuals "on whom purchase would be a financial hardship." Dr. Feeney proposed the association go on record as endorsing Dr. Osborn's re-appointment to the State's top health post. This was passed enthusiastically and unanimously.

Dr. Israel Blodinger, Councilor, called attention to a number of vitally significant matters. Under recently effected procedural changes the Board of Directors of C.M.S. will represent the State's physicians far more truly than in the past. This also applies to the Medical Advisory Committee of C.M.S., replacing the old Professional Policy Committee. The Councilor submitted for consideration three resolutions concerning which the Council was anxious to have an expression of opinion from practicing physicians. Currently the American Medical Association is also much taken up with these issues. The resolutions covered free choice of physician, closed panel systems and medical care of the elderly. As applying to the first two of these the Council's phrasing "a reasonable degree of freedom of choice" was warmly debated by numerous members of the Association. The majority ultimately voted their preference for plain, unvarnished "freedom of choice." In the form adopted by the Association the resolutions therefore came to read about as follows:

1. The Association believes that freedom of choice from among all the qualified, able and willing physicians in a community is a fundamental medical principle.
2. The Association is opposed to closed panels and encourages its members to support systems of medical care which permit free choice among all the qualified, able and willing physicians in a community.
3. The Association pledges its continued support toward development of effective health insurance and prepaid medical care to all citizens, regardless of age.

These resolutions are to be passed on to the House of Delegates, State Medical Society, for consideration and action.

Dr. Jachin Davis, representing the Committee on Third Party Payments, expressed satisfaction with current liaison between the State Society and C.M.S. He introduced a resolution that the Council negotiate with the Directors of C.M.S.

to include anesthesia benefits in all C.M.S. contracts. The discussion was mostly favorable and the resolution passed.

Following election of new members Dr. James Root of Waterbury read a prepared statement critical of the Conservative Party. Thereafter, with supporters and detractors alternating on the floor the Association was treated to the hottest pyrotechnical display since the sale of fireworks became illegal.

Subsequently, however, the Conservative Party nominees for county officers and State Society delegates won handily over an opposing slate proposed by the Board of Governors. County officer nominees were identical in both slates and there was more overlapping than cleavage in the proposals for delegates and alternates. The Conservative Party achieved a further victory with its slate for the incoming Nominating Committee. The Committee was elected under a new procedure said to assure equable geographical representation throughout the county. Of even more significance, it will no longer be possible for any Board of Governors to perpetuate itself in office.

Dr. Blodinger read a series of proposed amendments to our county by-laws. Those relating to procedural matters passed without incident but two that raised the specter of a dues increase proved sticky. One eventually passed while the other was defeated. The latter was a proposal to include the costs of the annual dinner in membership dues. More successful was an amendment authorizing employment by the Association of a full time executive secretary. Dr. Hyman Levin, in the discussion preceding adoption of this amendment, cogently but with little avail argued the opposition, or economy, viewpoint. Our Association thus joins Fairfield and Hartford Counties in voting full-time executive help for the conduct of its affairs. According to the Hartford County delegate the system is well regarded there.

The business meeting closed with a discussion of physicians' listings in the yellow pages of the telephone directory. It seems that some members have been listing their names and other information in telephone directories outside their home town. This practice is regarded with a jaundiced eye by the Association, which passed a resolution against members listing themselves in any town in which they do not have an office.

The proceedings after dinner were graced by a few remarks from Dr. John Freiheit, our incoming president. Members then heard a vigorous talk on socioeconomic trends in medicine delivered by Dr. Clyde Deming.

Clyde Deming of New Haven in his address to the New Haven County Medical Association, as retiring President, spoke at some length concerning the conditions in the State Medical Society and in the Connecticut Medical Service which gave rise to the revolt on the part of the members of the Society against the then existing leadership.

The apparent solution of the difficulties between the Medical Society and the Connecticut Medical Service was listed as the most notable accomplishment of the past year.

The initiation of measures to insure an appeal by a physician from any grievance he may have against a hospital of which he is a staff member was listed as a second accomplishment.

The location of the New Haven County Medical Association records from 1783 to 1917 and their placement in the Yale Historical Medical Library was a third accomplishment.

Dr. Deming announced the action of the County Society in favoring a full time Executive Secretary. He pointed to the problems which face the medical profession today and made an eloquent plea for active, dedicated interest on the part of all doctors to protect American medicine. He urged more attention in our local medical society programs to socio-economic and political affairs as they affect the practice of medicine.

Cancer Remedies Called Too Toxic For Routine Use

The extreme toxicity of such anticancer agents as nitrogen mustard must rule out their routine use with surgery for the present, although, in time, chemotherapy is likely to prove an effective early-stage adjunct, the Boston Surgical Society was told by Dr. George E. Moore, Director and Chief of Surgery of the Roswell Park Memorial Institute, Buffalo, N. Y.

The more powerful agents can be so toxic that unless dosage and administration are under the most stringent controls they may overcome host resistance to such a degree that tumor metastasis and growth are increased tremendously.

Most of the agents currently being tested, Dr. Moore said, appear to be effective against a number of different cell types found in the peripheral blood, although they are not clinically significant against the majority of tumors.

Considerable emphasis is currently being given at Roswell Park to the study of the role of host factors in tumor spread, he noted. Resistance varies so widely and inexplicably among individuals that "the mere presence of tumor cells in the peripheral blood, lymph, or body cavities is by no means necessarily tantamount to a death sentence."

Recent experiments demonstrate that when cortisone is given mice before tumor implantation the minimum number of cells required for metastasis is reduced from 1,000,000 to approximately 35,000, he said. In another approach to the host problem, millipore chambers containing tumor cells are being implanted in animals to determine if the host is capable of destroying them and how long it takes.

Commenting on his series of assays of regional blood taken before and after manipulation during surgery, Dr. Moore said there is "probably" an increase of tumor cells in the regional veins following manipulation of the tumor.

Ligation of the proximal veins before resection for cancer of the colon or rectum should be mandatory in every case, he declared. Tumor spread in the body cavities presents a special problem, and peritoneal washings have yielded many positives for lower-bowel carcinoma.

From the diagnostic point of view, according to Dr. Moore, it is "almost impossible" to differentiate the type and location of tumors from cells in the blood. Cell clumps are rare in the peripheral blood but quite commonly found in veins draining the tumor site.

Cannulation of the thoracic duct, which has been performed diagnostically in 27 cases so far, is proving a rich source of lung tumor cells, Dr. Moore said.

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Mrs. John A. Bucciarelli, New Canaan

Treasurer

Mrs. J. Alfred Wilson, Meriden

The first board meeting and organizational meeting of the 1959-1960 Auxiliary year will be held May 18, 1959 at the Connecticut Light and Power Co. in Berlin. This organizational meeting is for all state and county officers and chairmen. Substitutes must be appointed by the chairman if she is unable to attend. Mrs. Walter Nelson of Cromwell, president will preside. The program follows:

- 9:30 A.M. Registration
- 10:00 A.M. Board meeting
- 11:00 A.M. Organizational meeting
- 1:00 P.M. Luncheon in the cafeteria—75¢
- 2:00 P.M. Summary of meeting.

After the call to order, pledge of loyalty, and announcements at 11:00 A.M. the group will be divided into discussion groups. These groups will appoint one member to present the summary in the afternoon.

DISCUSSION GROUPS

1. President and President-elects—Mrs. C. M. Gratz, leader
2. Memberships, Treasurers and Finance chairmen—Mrs. J. Alfred Wilson, leader
3. Program, American Medical Education Foundation, and Ways and Means—Mrs. Charles N. Sullivan, leader
4. Corresponding secretaries, Recording secretaries, and Historians—Mrs. Edwin R. Connors, leader
5. Parliamentarians, and Revisions chairmen—Mrs. F. Erwin Tracy, leader
6. Editors, Publicity chairmen and *National Bulletin* chairmen—Mrs. Paul W. Tisher, leader
7. Public Relations, School Health, Safety and Civil Defense—Mrs. John N. Gallivan, leader
8. Legislation and Mental Health—Mrs. Richard Brown, leader
9. Today's Health—Mrs. Charles E. Meredith, leader
10. Para-medical Careers Recruitment—Mrs. Edward Allen, leader
11. Hospitality and Art chairmen—Mrs. Willard Buckley, leader

NATIONAL CONVENTION—ATLANTIC CITY—JUNE 8-12

Plan now to attend this annual meeting of our National Auxiliary, to participate in the meetings and round tables,

and to learn more about the Auxiliary. You are especially urged to attend the Monday pre-convention meetings. Monday, June 8th Round Table discussions will be held from 9:30 A.M. to 12:15 P.M. in various rooms of Hotel Haddon Hall, Auxiliary headquarters. Connecticut auxiliary members will go to the Mandarin Room on the 13th floor with other auxiliaries with membership between 1,000 and 2,000. The program follows:

- Chairman, Mrs. Carl E. Burkland, California
- Timekeeper, Mrs. Luther H. Wolff, Georgia
- Coordinator, Mrs. Homer Benson, Hawaii
- 9:30 A.M. By-laws. Finance, Parliamentary Procedure, Report Forms
- 10:00 A.M. Mrs. Mason G. Lawson
- Mrs. Jay G. Linn and Mrs. Harlan English
- Mrs. Roscoe E. Mosiman
- Mrs. C. Rodney Stoltz
- 10:00 A.M. Publications—Mrs. E. M. Egan, moderator
- to Bulletin Circulation—Mrs. F. Erwin Tracy, moderator
- 10:15 A.M.
- 10:15 A.M. American Medical Education Foundation
- to Mrs. Karl F. Ritter, moderator
- 10:45 A.M. Mr. John Hedback, guest speaker
- 10:45 A.M. Today's Health
- to Mr. Robert Enlow, Circulation Manager
- 11:15 A.M.
- 11:15 A.M. Program Planning
- to Mrs. Richard J. McDonald, N. J., moderator
- 11:45 A.M.
- 11:45 A.M. Membership
- to Mrs. Richard F. Stover, moderator
- 12:15 P.M.

At 4 P.M. a tea and fashion show, compliments of Pfizer Laboratories and J. B. Roerig and Co., divisions of Charles Pfizer and Co. Inc. will be held in the Carolina room of the Chalfonte Hotel. Admission by ticket only, which can be secured at time of registration. Number limited.

Convention opens on Tuesday morning, June 9, and continues through Thursday, June 11. Post-convention planning meeting Friday, June 12.

The Doctor's Office

Sidney L. Cramer, M.D. and E. Marvin Henken, M.D. announce their association in the practice of radiology at 64 Garden Street, Hartford.

John J. Doyle, M.D. announces the opening of an office for the general practice of medicine at 597 Burnside Avenue, East Hartford.

Philip Gray, M.D. and Jerome O. Kirschbaum, M.D. announce their association in the general practice of medicine at 311 Main Street, Portland.

Philip D. Henry, M.D. announces the opening of offices for the practice of general surgery at 59 Elizabeth Street and 74 Judson Street, Huntington.

Samuel J. Janet, M.D. announces the opening of an office for the general practice of medicine at 21 Old Tavern Road, Orange.

Jolyon S. Tucker, M.D. announces the opening of an office for the practice of neurology and electroencephalography at 64 Garden Street, Hartford.

Opening For Physician

Dr. John E. Thayer, Chairman of the State Committee on Blood Banking, and Dr. Ralph E. Kendall, have been appointed by that committee to interview applicants for the position of Director of the Connecticut Regional Blood Program. Any physician interested in this position should contact Dr. Thayer at St. Francis Hospital, Hartford 5, Connecticut, Telephone CHapel 9-8281.

Fluorescent Techniques May Speed Diagnoses

A technique discovered more than ten years ago and refined in the past four years, is expected to revolutionize the diagnosing of communicable diseases.

The new procedure, as announced recently by Arthur Flemming, Secretary of Health, Education, and Welfare, permits speedy "smear" or slide testing of specimens instead of time-consuming tests on animals.

He said the technique has been successfully field tested and that it could possibly help in wiping out rheumatic disease by allowing an early diagnosis of strep throat.

Special Notices

TRUDEAU SCHOOL OF TUBERCULOSIS

AND

OTHER PULMONARY DISEASES

The Trudeau School of Tuberculosis and Other Pulmonary Diseases, which will hold its Forty-fourth Session from June 8th to 26th, 1959, continues to provide a unique opportunity for training in the field of chest diseases. This annual post-graduate course, conducted under the auspices of the Trudeau Foundation and supported by the Hyde Foundation, is able to provide outstanding instruction at a minimal tuition of \$100 for a three-week session. Attendance at the Trudeau School carries with it some distinction as well as a thorough review for specialization in pulmonary diseases or for work in public health involving tuberculosis.

The Trudeau School gives its students a chance to combine a great educational experience with an enjoyable holiday in the most beautiful part of the Adirondacks, among pleasant companions. The enrollment is necessarily limited and therefore application should be made early. A few scholarships are available for those who qualify.

All inquiries should be addressed to the Secretary, Trudeau School of Tuberculosis and Other Pulmonary Diseases, Box 500, Saranac Lake, N. Y.

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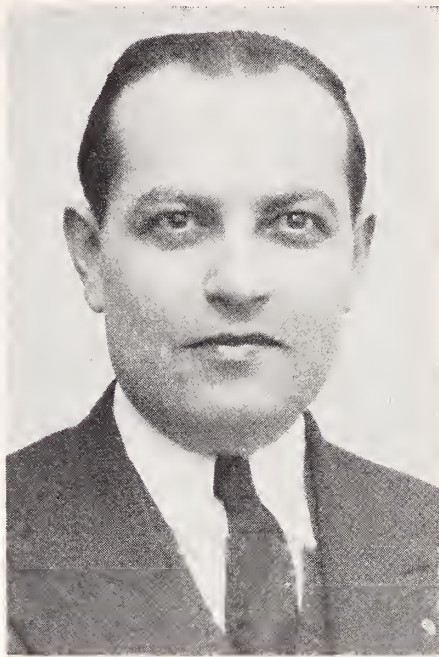
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Obituaries

Abraham Arthur Klein, M.D.

1900 - 1959



On March 3rd, while waiting to be called to testify in the Hartford Police Court Dr. Abraham A. Klein was stricken and died before he arrived at the Hartford Hospital. Dr. Klein was born in Hartford August 15, 1900, the son of the late Max and Bertha Siegel Klein. He graduated from the Hartford High School and was a member of the class of 1923 at Trinity College. In 1929 he graduated from the University of Louisville Medical College and then interned at the Jewish Hospital in Cincinnati, Ohio.

His association for twenty-seven years as physician in the Hartford Public School System and assistant police surgeon in the Hartford Police Department gave Dr. Klein the opportunity to put to great effect his tremendous interest and concern for people as individuals. In both these capacities he gave greatly of himself not only as a physician, but as friend and advisor to all who brought to him their social and domestic problems. An ardent believer in education he always stood ready and eager to help and encourage the students to pursue further study and to carve out for themselves a good and worthy life. His interest in people went far beyond the immediate call on his services and for this he was greatly admired and deeply loved by the students with whom he came into contact, by the police force and by his patients. They will all miss his warm smile and genuine friendship for them.

Dr. Klein served on the staff of the Mt. Sinai Hospital and Hartford Dispensary. He was a member of the American Medical Association, The Hartford County Medical Association and The Hartford Medical Society. He was a thirty-second degree Mason and a member of the John Robinson Lodge of Louisville, Kentucky. He was a member of the Phi Delta Epsilon Medical Fraternity. He was an honorary

member of the Hartford Police Athletic League. He was a member of the Temple Beth Israel in West Hartford.

Surviving Dr. Klein are his wife Rose G. Klein, his daughter Irma Dorothy Klein, his son Mark Henry Klein, two sisters and a brother. A devoted husband, proud father and loyal brother, Dr. Klein is deeply mourned by all who knew him.

SAMUEL DONNER, M.D.

Robert M. Carpenter, M.D.

1894 - 1959

Robert M. Carpenter who practiced medicine in Stamford for 39 years, until his death on February 7, 1959 at the age of 64, was a twentieth century humanist. The intellect from whose many facets radiated the wisdom of modern medicine, medical art and history, the lessons and guidance of ancient history, the inherited knowledge of local lore, and above all the passion for truth and justice, was suddenly taken from his family, patients, friends and colleagues. But we all are thankful that we had him so long with us, this man, who often spoke as though he came from the company of America's eighteenth century greats.

Born of humble parentage, he combined the heritage of early American stock and of Germans brought to this country by the Revolution of 1848. Of Quaker heritage, Bob Carpenter endeared himself to every man. To his patients he was a true physician and a Doctor in the broadest sense of that word—namely a teacher. He taught them the ways to health and, as the occasion arose, he would talk with equal ease of natural history, ancient history, the Bible and of just the ordinary happenings of the day with an especial charm.

To his fellow practitioners he was an articulate conscience, the voice of righteous indignation, as we will ever recall when we remember the words he would quote: "Upon what meat doth this our Caesar feed, that he is grown so great?" Julius Caesar—Shakespeare.

A native of Port Chester, New York, Bob Carpenter graduated in Medicine in 1916 from Loyola University, Chicago, Illinois, and later interned at the Mountainside Hospital in Montclair, New Jersey. Then briefly before entering military service he practiced in St. Charles, Illinois. During World War I he served as a Lieutenant in the U. S. Army. He then came and stayed to enrich Stamford by practicing here. His practice was broad and over the 39 years he delivered more than 3,000 babies and was a tireless general practitioner. He was a Senior Member of the Medical Staff of the Stamford and the St. Joseph's Hospitals. He was only recently elected President of the Staff of the Stamford Hospital. He was a past president of the Stamford Medical Society, a member of the American Medical Association, the Fairfield County Medical Society and the Connecticut State Medical Society. Dr. Carpenter was a founding member of the Stamford Academy of General Practice, of which he was a past president.

Our community was doubly saddened by the death of his wife, Dorothy Eleanor, two days later. They had been inseparable through life, in health, sickness and in the practice of medicine, for she was his office nurse for years.

They are together still.

ARTHUR KOFFLER, M.D.
STUART H. BOWMAN, M.D.

George Francis Vail, M.D.

1878 - 1959

Dr. George Francis Vail was born in Hartford, on November 22, 1878 and died in the Hartford Hospital on January 8, 1959 of hypertensive heart disease with cerebral hemorrhage.

Dr. Vail attended the schools in Hartford and was graduated from Villanova in 1898. Following this he attended the Medical College of the University of Pennsylvania and was graduated in 1902. He entered general practice in Hartford until 1907, when he went to Europe for special studies in eye, ear, nose and throat. These studies were carried on in London, Vienna and Berlin. He returned to Hartford in 1907 and resumed his practice as an eye, ear, nose and throat specialist.

For fifty years he carried on his specialty at 36 Pearl Street. He retired from his office at 36 Pearl Street in 1958. He maintained a small office at his home in Hartford where he continued to see his many devoted former patients.

He was a member of the Hartford Medical Society, the Hartford County Medical Association, the Connecticut Medical Society and its E.E.N.T. Section, and the American Medical Association.

He leaves a widow, Mrs. Hazel Budd Vail; two daughters, Hazel Vail, and Mrs. David D. Russell, Jr., of New Britain; two grandchildren and a brother, Attorney William F. Vail of Hartford.

WALTER WEISSENBORN, M.D.

Neil Herbert Bailey, M.D.

1880 - 1958

The life of a dedicated physician is an arduous one. The long years of formal study and training are but the beginning of a lifetime of the same arduous routine. It is the consciousness of being a benefactor of mankind that eases the physician's burden and gives him great satisfaction. Such a dedicated physician was Doctor Neil Herbert Bailey, born May 2, 1880 in Hazardville, Connecticut.

Graduating from East Longmeadow, Massachusetts High School in 1897, Doctor Bailey entered the drug business in Hartford later the same year. He rapidly became a successful and prominent managing druggist.

Sports interested him greatly. Baseball was his favorite and in it he was quite proficient. For years, sports and study seemed to be his only recreation.

After pre-medical preparation, he began the study of medicine in 1907 and graduated with honors from the University of Maryland, College of Physicians and Surgeons, in 1911.

Although honored with an offer to intern at the College Hospital, he chose Saint Francis Hospital, Hartford, where two uncles had served with distinction as staff members.

Following his internship at Saint Francis Hospital, Doctor Bailey started the general practice of medicine in Hartford in 1912.

On November 29, 1917 he married Miss Florence Long of Hartford, who now survives him, with two children and six grandchildren. A son, Herbert E. Bailey, resides in Westfield, New Jersey where he is an attorney for, and assistant secretary of Johnson & Johnson, New Brunswick, New Jersey. A daughter, Geraldine, Mrs. Paul Eldridge, lives in Wethersfield, Connecticut.

Within three years Doctor Bailey's general practice had become so large that he limited his practice to obstetrics in February, 1916. To say that he was abundantly successful is verified by the fact that he delivered more babies in Hartford than any other doctor, in seven of the years from 1918 to 1926 inclusive. In his private practice he delivered a total of 2,883 babies during the years 1912 through 1936.

Approaching sixty years of age, and still anxious to be professionally active but in a less strenuous field than obstetrics, he became Director of the Bureau of Communicable Diseases of the Hartford Health Department in 1938. He was made Deputy Health Officer of the City of Hartford in 1939, serving in this capacity until 1951. Doctor Bailey had a part in the reforms, improvements and pioneering initiated with far-reaching results in the Hartford Health Department during these years. His service to the city was limited by law which required retirement in 1951.

Still unwilling to rest on his laurels and determined to be of further service to mankind, Doctor Bailey became Medical Director of the Hartford Blood Donor Station of the American Red Cross until 1953, and then Attending Physician of the mobile unit until 1955. Finally it was time to realize the need of rest and relaxation, and after forty-four years of medical practice he retired from the practice of medicine in 1955.

It would be impossible to estimate the extent and variety of Doctor Bailey's charities; however, many a person had a longer and happier life because of his "just between us" type of generosity.

Doctor Bailey was President of the Hartford Medical Society in 1945. He was also a member of the County and State Medical Societies and the American Medical Association. He was an Obstetrical Staff Member at Saint Francis Hospital, McCook Memorial Hospital, and Saint Agnes Home, as well as Consulting Obstetrician at Manchester Memorial Hospital and Rockville City Hospital. He was a communicant of Saint Joseph Cathedral, Hartford.

Death came suddenly to Doctor Bailey on June 30, 1958 bringing to an end the indefatigable life of a man who loved people, and loved the practice of medicine.

To know Doctor Bailey was to love him and to admire him as an able physician, devoted husband and father, kindly gentleman, loyal friend and cheerful companion.

He was, in all respects, a credit to his God, his country, his family and his profession.

Having completed a life of noble accomplishment, may Doctor Neil Herbert Bailey now rest in peace.

CHARLES W. DALY

William Wallace Tracey, M.D.

1892 - 1959

Dr. William Wallace Tracey was born in Norwalk, Connecticut in 1892. He was a pupil of St. Mary's Parochial School later Norwalk High School, where he completed a four year course in three years. He graduated from Yale University and studied medicine at the Columbia College of Physicians and Surgeons. He graduated from Physicians and Surgeons in 1916.

He was licensed to practice in Norwalk in 1917 after serving surgical residency in Postgraduate Medical School in New York. He returned to Norwalk where he became a

member of the surgical staff from 1919 to 1942. He was a member of the consultant staff from 1942 to 1949. Because of ill health he discontinued practice in Norwalk and later became a member of a number of Veterans Administration Hospital staffs.

His late father was Dr. William J. Tracey, former chief of staff of Norwalk Hospital and a brother of Dr. Edward J. Tracey, predeceased.

He saw service in World War I and served as a Lieutenant in the Medical Corp. He died February 14, 1959, at the age of 66.

WILLIAM McMAHON, M.D.

In Memoriam

PAOLILLO, CHARLES G.—New Britain; Yale University School of Medicine, 1935; practiced in New Britain 22 years following his internship at New Britain General Hospital; he was a lieutenant in the Medical Reserve, U.S. Army; died unexpectedly of a heart ailment at his home March 24, aged 50.

SWAN, HORACE C.—Hartford; Tufts College Medical School, 1903; professor emeritus and medical director of Trinity College; he served the college for 42 years as a professor of physiology and hygiene and as medical director; received his medical degree cum laude and later studied at the Harvard School of Public Health and Graduate School of Medicine; died at his home March 3, aged 80.

ZAFF, FRED—New Haven; University of Michigan, 1937; assistant clinical professor of radiology at Yale Medical School and attending radiologist at Grace-New Haven Hospital; served in World War II in England, France and Germany, rising in rank from lieutenant to major; member of the American Board of Radiology, the American College of Radiology, the New England Roentgen Ray Society, the American Medical Association, Connecticut Medical Society, New Haven County Medical Society and the New Haven Medical Association, during the late 1940s consultant at the Newington Veterans Administration Hospital; died suddenly of a heart attack March 12, aged 47.

Hepatitis Cases Reported Rising Throughout U. S.

Infectious hepatitis cases jumped 63 per cent in January of this year over January, 1958, continuing a national upward trend that has persisted since last July, the National Office of Vital Statistics reports.

Dr. Carl C. Dauer, medical adviser of NOVS, says that a comparison of morbidity data for the last several years raises the prospect that the number of cases might continue to rise for the next three years in keeping with the apparent cyclic nature of the disease. NOVS considers infectious and serum hepatitis as one category, although nearly all cases reported are infectious.

Starting in 1951, when 7,349 cases were reported, incidence of hepatitis rose steadily the next three years, reaching an all-time peak of 50,093 in 1954. Cases declined to 31,961 in 1955,

to 19,234 in 1956, and to 14,922 in 1957. Last year's incidence advanced to 16,012.

All sections of the country have experienced outbreaks in the last few months. The West North Central Division (Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas) has reported the largest percentage increase since last January. The Pacific Coast, however, continues to report the largest number of cases. Mortality is quite low.

As in many reportable diseases, the statistics on hepatitis are not fully representative of the national incidence, epidemiologists point out. Standards of reporting vary among the states and in the case of infectious hepatitis the problem of differentiating the disease in the preicteric stage from influenza or infectious mononucleosis, particularly when jaundice is not present, contributes to underestimation of occurrence.

SOURCE HARD TO DETERMINE

Drs. Bruce Dull and Rudolph Donath, Communicable Disease Center epidemiologists in Atlanta, said that identification of a common source of the disease was almost impossible to confirm in the many outbreaks they have investigated in the last six months.

All available evidence points to the fecal-oral route in transmission of hepatitis A virus, they agree. Epidemics have resulted from fecal contamination of water and food and, in some cases, from milk contamination. Spread of the disease within a community has invariably been rapid.

Studies to date have borne out the assumption that infection with either the A or B virus is followed by resistance to infection with the same virus, Drs. Dull and Donath agree. The immunity to A virus is usually of longer duration than that to B virus, but very few reinfections have been observed in either.

Many physicians, particularly in smaller towns and rural areas, still are not fully aware that jaundice need not be associated with infectious hepatitis and thus are not recognizing many cases, Dr. Dull pointed out.

High School Editors Praise Medicine

Of all the professions, medicine offers the highest prestige, interest, and usefulness to society, according to a survey conducted by Columbia University's Graduate School of Journalism among over 1,000 high-school editors.

Other findings: law will pay best, the ministry is most conducive to a good family life, journalism offers low pay, teaching was lowest in prestige and financial prospects but second only to medicine in usefulness. The high-school editors considered bankers and businessmen to be engaged in the least useful and least interesting professions.

Cancer Control

The community physician is the most important man in cancer control, according to Dr. W. Kenneth Clark, vice president of American Cancer Society. "If the community physician is not cancer-conscious, the specialist may come into the picture too late," he said. ASC estimates that of 255,000 cancer deaths in U.S., about 75,000 could be prevented by earlier detection and treatment.



A Rational Program For Treatment Of Metastatic Breast Cancer

IRA S. GOLDENBERG, M.D.

New Haven

ONE of the most discouraging problems in medicine today is the woman with metastatic cancer of the breast. Halsted spoke quite optimistically of the future at the turn of the century when he devised the radical mastectomy. It was his opinion that the operation encompassed the malignancy adequately and that, if performed at an early date in the course of the disease, would almost always result in a cure. He was unable, however, to reckon with the problem of remote metastatic disease. It is so common today to have a patient with an "adequate mastectomy" performed many years earlier develop metastatic disease five, ten or even fifteen years later. It is not at all clear why metastatic disease of this nature should appear at some time in almost three-quarters of women with breast cancer. Many theories can be advanced such as cells "broken off" at operation which do not immediately proliferate because of an improper metabolic milieu. This milieu is present many years later and the cells then propagate. It is hard to believe such is the case, but few better explanations have been offered.

The general picture of therapy, however, is not quite as grim as it would seem. In a recent report from the Mayo Clinic, where almost 10,000 patients with carcinoma of the breast were followed, it was noted that the five year survival increased from about 40 to 65 per cent from the earliest portion of the study (1910-1924) to the last part of the study (1950-1954). A possible explanation for this increased survival rate is the fact that patients came earlier to their physicians for therapy in 1950 than in 1910. One evidence for this viewpoint was the marked decrease in axillary metastases noted during

the different periods of treatment in the Mayo study. In the earliest period of the study, about two-thirds of the patients presented with axillary lymph node involvement while, in the last portion of the study, less than half presented this finding.

Any discussion of metastatic carcinoma of the breast implies that primary therapy has been carried out previously. This is not necessarily a fact. Many patients have not had primary therapy when their metastatic disease appears. The metastasis may be the first evidence that a malignancy is present. The discussion here does not presuppose primary therapy and the treatment of metastases when they develop should be no different whether or not mastectomy has been done.

A definite diagnosis of metastatic disease must be made before starting *any* therapy. Sometimes this may be very difficult to achieve. If lymph nodes or subcutaneous nodules are involved, a biopsy can be obtained easily and microscopic proof of the metastatic disease obtained. When bone is involved, one must depend on interpretation of roentgenograms for the diagnosis and in many cases it may be difficult to differentiate between normal aging processes and metastatic disease. When cerebral or hepatic lesions are present, one must depend almost entirely on clinical judgment for the diagnosis.

Having decided that metastatic disease is present, there are several basic premises that must be noted. The first is that by all present standards metastatic breast cancer is an incurable disease. Medications are available to palliate the patient but no one would delude himself into believing that cure is possible with present therapeutic endeavor. Life can be prolonged in relative comfort, however, and this becomes an extremely important fact.

Secondly, there should be evidence of advancing disease before starting, stopping, or altering treatment. Many patients will develop isolated metastatic lesions which remain static for many years and are asymptomatic. Since one is only palliating the patient, it seems pointless to initiate therapy for an asymptomatic lesion. One exception to this rule, however, is a lesion in weight-bearing bone. Pathological fracture is a possibility in such a patient and therapy should be initiated to prevent this complication.

Thirdly, only one form of therapy at a time should be utilized, rather than employing many modalities simultaneously. It is important to know that any form of treatment undertaken is not working so that another form may be substituted. Such information can never be derived if several modalities are brought into the therapeutic picture at the same time. Again, weight-bearing bone is an exception and should be treated together with other lesions demanding therapy when both are present.

Fourthly, while using hormone therapy it is always a good idea, when the drug begins to fail, to wait for "remission of withdrawal" before changing to another form of treatment. Some patients will improve when hormone therapy is abruptly stopped whether they have responded previously or not. This period of improvement may be very brief or it may last for several months and certainly, if at all possible, should be anticipated. Of course, if the patient is deteriorating rapidly while receiving a hormone preparation, it may not be wise to wait for the remission of withdrawal before proceeding to other types of therapy.

And finally, general psychological support which can be given to patients with this disease must not be neglected. Most patients are aware of their problem and are willing to accept the future if it is presented in sympathetic terms. It is so important that the physician form a strong bond with the patient to support her through what could possibly be a very stormy future. Faith in a physician becomes one of the most important therapeutic tools available at such times.

Keeping these facts in mind, a rational program for the therapy of metastatic breast cancer has been developed. The keystone of this plan is use of the simplest, most effective measures first—always keeping something in reserve for that time when the disease will be refractory to the currently employed therapy. In this way the patient very frequently can be palliated for a prolonged period of time.

In general, patients can be divided into premenopausal and postmenopausal groups, although the modalities of therapy are exactly the same. Minor differences do arise depending on the patient's menopausal status. These will become obvious as

the program is discussed. In the premenopausal patient, the simplest and most effective form of therapy is irradiation. It depends little on whether the metastatic lesion is in bone, skin, soft tissue, or even in the liver or cerebrum. Experience has shown that, when applied skillfully, irradiation can lead to healing of many lesions in bone and clearing of lesions in soft tissue areas. Recent experience with cerebral and hepatic metastases has shown that these areas formerly felt to be quite refractory to irradiation therapy can be treated with moderate degrees of success.

If irradiation has been administered and the patient continues to develop new lesions or shows advance of lesions already present, castration is the next method of therapeutic approach. It was believed many years ago that the success of castration in the treatment of metastatic breast cancer was due to tumor deprivation of estrogenic hormone. It is now known that the adrenal cortex also produces the same type of hormone and continues to produce it even in the absence of the ovaries. It may be, however, that a certain critical level of circulating estrogenic substance is necessary to support the neoplasm and castration removes enough of the hormone so that regression of the lesions takes place.

Surgical castration is by all means to be preferred. It is a simple operation and the morbidity and mortality are very low. Surgical removal of the ovaries is the only way that one can be certain that all functioning ovarian tissues have been removed. Irradiation certainly has a role to play, especially in a patient who either refuses operation or is considered to be an extremely poor operative risk. Adequate irradiation must be given. Some radiologists utilize small doses of irradiation which result in cessation of menses but do not eliminate ovarian function completely. Between 1,200 and 1,500 roentgens should be administered to assure discontinuation of estrogenic production by the ovaries.

Remission follows either form of castration in about half of the patients and in a few patients may last for many years. Prophylactic castration has not yet been proven to be of value in this disease. More important, by waiting, one may then be able to utilize castration at a time when symptoms appear. An extremely potent therapeutic tool thusly might have been wasted if used earlier when symptoms were absent.

If the patient's lesions continue to advance or new ones develop after irradiation and castration have been undertaken, exogenous hormone therapy should be utilized. Both androgenic and estrogenic substances have been used in the past. In general, testosterone and associated derivatives are probably the best hormones currently available. It has been postulated that androgens are effective by virtue of

neutralization of estrogen. Certainly no one would state unequivocally that these materials will work in every patient.

About 20 per cent of patients with androgen-treated metastatic disease will derive benefit with objective remission noted. Many other patients will be only improved subjectively. Sometimes it may be as important, however, to achieve subjective relief as an objective remission.

Estrogenic substances have been used especially in the older patient with soft tissue lesions. Varying degrees of success have been reported but statistical verification of the value of estrogens has not yet been achieved.

At the present time many new hormone substances have been synthesized and are undergoing clinical trial. There is little doubt that better hormones than are presently available ultimately will be developed.

Many patients will continue to progress even after the various modalities discussed have been utilized. The physician should not despair, however, since there are other forms of therapy which may be used. Ablative techniques, such as adrenalectomy and hypophysectomy, become important at this time. Adrenalectomy removes any remaining estrogenic stimulation which may be present. It is very difficult to assess completely the role of the pituitary in breast cancer but some investigators believe that not only is there adrenocortical stimulation from the pituitary, but in addition there may be pituitary-produced hormones which directly support growth of the metastatic lesions. For this reason many physicians feel that hypophysectomy is to be preferred to adrenalectomy.

When evaluating the possibility of ablative therapy, hormone dependency of the tumor should be ascertained if possible. Ablative procedures are more likely to be helpful if the patient has had a remission after castration or if hormonal therapy has previously been effective. An easy way to evaluate hormone dependency is by provocation of the adrenals to produce a large quantity of adrenocortical hormones and observe the patient's clinical response. Maximum adrenal stimulation may be achieved by administration of 20 units of adrenocorticotrophic hormone (ACTH) intravenously during a six-hour period on three consecutive days. Continuous observation should be made noting whether visible lesions change or the patient's symptomatology increases. Hormone dependency can be postulated should such changes be noted and benefit predicted after adrenalectomy. In some patients, however, there will be no clinical change with the ACTH infusion. One would be tempted then to say that hormone dependency is absent, but this may not always be the case. Although ACTH prep-

arations now available are potent, they may not stimulate the adrenal cortex to produce all of its hormones. The cortex may be stimulated but not those areas which produce estrogenic substances. Hence, a patient will have no change in clinical status where indeed a hormone dependent tumor may be present. The final decision regarding adrenalectomy in such a patient may be very difficult.

Another method of evaluating hormone dependency is the administration of female hormone, again noting any changes in the patient's visible lesions or general clinical status. One of the most potent preparations available is ethinyl estradiol which when given at the rate of 3 mgm. daily usually will cause some response if the metastases are hormone dependent.

Huggins, who originated adrenalectomy for carcinoma of the breast, feels that patients over 65 years of age are poor candidates for the operation. In addition, he believes adrenalectomy is most effective in patients with a slow-growing, well differentiated tumor and who excrete large quantities of estrogenic degradation products in their urine. Fortunately, adrenocortical hormones now used for replacement therapy after bilateral total adrenalectomy are excellent and these patients can be maintained without difficulty.

Hypophysectomy presents other problems. Chief among these is the development of diabetes insipidus after operation which may be very difficult to control and in some cases remains completely uncontrollable. How unfortunate to subject a patient to the symptoms of diabetes insipidus replacing what in retrospect would be considered minor symptoms of metastatic breast cancer!

When all of these measures fail, there is little that can be done to give further relief to patients with metastatic breast cancer. Cortisone therapy has some subjective benefit and should be utilized when all else fails. Any of the corticosteroid preparations may be used to give the patient a sense of well-being. Very few reports of objective remissions have been published. It is amazing how long a patient in a semi-terminal state may be maintained in relative comfort with interest in the world about her with cortisone therapy alone. It is therapy, however, that should be reserved for the terminal episode since better forms of therapy can be utilized earlier in the course of the disease.

The postmenopausal patient presents a few different points insofar as therapy is concerned, but the general plan outlined here is a practical one. The main difference arises in considering castration. Surgical removal of the ovaries may be indicated even though a patient is postmenopausal. This is particularly true of a younger patient who is less

than five years postmenopausal. Some investigations indicate that there is functional ovarian stroma with production of estrogenic substances even though menses are absent in such patients which may persist as long as 75 years of age. If such is the case, then certainly excision of ovarian tissue is indicated. Ovarian irradiation probably is not adequate in such patients since its effects are so hard to determine.

The problem of therapy of breast cancer is a dis-

couraging one but something can be done, albeit palliative; with a conscientious physician and an appreciation of the problem, patients can be made comfortable enough to enjoy life. The ultimate therapy will evolve in time from a better understanding of the etiology and pathogenesis of the disease. The answer possibly will come from the biochemical laboratory where antimetabolic agents are being developed. Until that time, the physician must do his best with a difficult situation.

Diabetic Blindness Related to Type, Length of Illness

Blindness as a complication of long-term diabetes may be prevented by early detection and adequate control of the disease, a new study has suggested.

The study, conducted at Joslin Clinic, Boston diabetes detection center, lends support to the "growing conviction" that complications of long-term diabetes are related to the degree of control maintained over the years.

Writing in the current *Journal of the American Medical Association*, Drs. Howard F. Root, Stanley Mirsky and Jorn Ditzel said the prevalence of blindness due to diabetes has been rising as more persons survive diabetes for long periods.

Diabetes is a disease in which the body's utilization of sugar is impaired. The usual treatment involves diet control and injections of insulin, a substance necessary for the breakdown of sugar in the body.

Diabetes appears to seriously disturb the body's whole metabolism (the physical and chemical changes in the body). This disturbance apparently plays a role in the development of a degenerative eye condition known as proliferative retinopathy in which there are changes in the retina and blood vessels. It may lead to blindness.

The doctors studied the records of 847 persons who developed proliferative retinopathy during the last 30 years. They found that none of the patients had good control of diabetes through diet or insulin therapy from the onset of the disease.

All had severe diabetes of long duration, usually beginning at a relatively early age.

However, many other patients are known to have survived diabetes with onset in childhood for periods of 20 to 30 years without any evidence of retinopathy when their diabetic treatment had been adequate.

The authors feel that proliferative retinopathy can be prevented and postponed by early diagnosis and continuous control. They said physicians are "obligated to plan treatment and supervise management in such a way as to provide the best control attainable at the present time. . . ."

The study showed:

- That the 847 patients had diabetes for an average of 17 years before developing proliferative retinopathy.

- That nearly half of them had diabetes before they were 20 years old and the rest before the age of 40. Most of them had difficulty in controlling the disease.

- That among the last 206 consecutive cases there was no case of blindness in a patient under 20 years of age, but that 25 per cent of those over 20 were blind.

Diaphragmatic Hernia

With particular reference to esophageal hiatus types

GUSTAF E. LINDSKOG, M.D. AND NICHOLAS A. HALASZ, M.D.*

DIAPHRAGMATIC hernias and their complications present problems touching on many phases of medicine. Respiratory distress in the newborn, upper gastrointestinal hemorrhage in the adult, precordial chest pain in the elderly are but a few of their manifestations. Harrington,¹ Allison,² Sweet³ among others have emphasized the importance and frequency of diaphragmatic hernias, and interest in them has been steadily increasing.

The present study is based on 100 consecutive patients with diaphragmatic hernia treated on the thoracic surgery service of the Grace-New Haven Community Hospital between 1942 and 1958. Seventy-three had herniation through, or related to, the esophageal hiatus and constitute the main subject of this paper. Table I shows the entire group arranged according to anatomical diagnosis.

TABLE I

Sliding Hernias	63	F:40	Av.age: 59 yrs.
Av. age: 57 yrs.		M:23	Av.age: 54 yrs.
Parahiatal Hernias	5	F:5	
Av. age: 61 yrs.		M:0	
Morgagni Hernias	9	F:9	Rt.: 8
Av. age: 50 yrs.		M:0	Lt.: 1
Traumatic Hernias	8	M:7	Lt.: 7
Av. age: 41 yrs.		F:1	Rt.: 1
Bochdalek Hernias	6	M:3	Lt.: 4
		F:3	Rt.: 2
Short Esophagus Hernias	4	M:2	
		F:2	
Eventration	4	F:3	Lt.: 3
		M:1	Rt.: 1
Esophago-aortic Hernias	1	F:1	
		M:0	

The study of hiatus hernia has been plagued by inconsistent terminology. Our classification is that suggested by Sweet.³ Three main types of hiatus hernia are recognized. The most common sliding type has a peritoneal sac and is characterized by a cephalad displacement of the cardioesophageal junction and proximal stomach through the hiatus. This is accompanied by an apparent or actual shortening of the esophagus.

The parahiatal (often known as paraesophageal) type of hernia occurs through a defect immediately

adjacent (and usually lateral or anterolateral) to the esophageal hiatus. In this hernia the cardioesophageal junction remains fixed in a relatively normal position, and the greater curvature of the stomach constitutes the 'leading edge' of the hernia. These hernias always have a peritoneal sac, which may however be incomplete.

The third type of hiatus hernia is the short esophagus type. It may be caused by a congenital inadequacy of esophageal length, with a secondary intrathoracic transposition of the cardioesophageal junction and of the cardiac end of the stomach. This hernia never has a complete peritoneal investment.

The rarer esophago-aortic hernia occurs posteriorly, the defect being between the esophageal and aortic hiatuses, or involving both.

SYMPTOMATOLOGY

The symptoms caused by hiatus hernias fall naturally into four groups. Some kind of pain has been found the most frequent. Symptoms arising from bleeding and obstruction have often been described. A variety of digestive complaints, such as heartburn and flatulence which cannot be fitted into the above categories, occur with considerable frequency. The symptoms of the hiatus hernias in the present series are catalogued in Table II.

TABLE II

Symptoms of Hiatus Hernias—73 pts.		
Digestive	50	68%
Pain	49	67%
Bleeding	32	44%
Obstruction	24	33%

Pain was a symptom in 67 per cent of the patients. It was predominantly substernal in location, less frequently epigastric and occasionally radiating to the mid-back or shoulder. It was the only symptom of 10 patients (18 per cent). Digestive manifestations had a similar incidence, occurring in 68 per cent of the group. They were the sole symptoms in three cases. Bleeding and/or resultant anemic symptoms (weakness, dyspnea or palpitation) were described in 44 per cent, and were the only manifestations of the hernia in nine (16 per cent). In this group anemia from other causes had been ruled out as far as was possible. Obstructive dysphagia

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and vomiting were present in 24 patients or 33 per cent of the series.

Nineteen of the patients with hiatus hernias were demonstrated to have esophagitis by x-ray study, esophagoscopy or both. This represents an incidence of 26 per cent. The associated symptomatology of this group is shown in Table III.

TABLE III

Symptoms of hiatus hernias complicated by esophagitis—19 pts.

Digestive	12	63%
Pain	12	63%
Bleeding	8	42%

Aggravation of all symptoms in the recumbent position has long been recognized as frequent in patients who have hiatus hernias. Reflux of acid gastric juice into the sensitive esophagus, filling and distension of herniated parts as well as compression of adjacent organs explain this phenomenon. Positional variation in intensity of symptoms was observed in 29 per cent of the hiatus hernia group, and only in four per cent of all other diaphragmatic hernias.

PHYSICAL SIGNS

Physical findings characterizing diaphragmatic hernias are the result of the anatomical situation. Herniation of the stomach and intestines into the thorax may cause bowel sounds to be audible in the chest. Gastric succussion and gurgling may be quite evident. This sign was present in 20 per cent of the hiatus hernia group. Compression of adjacent lung causes diminution of breath sounds, dullness, and decreased fremitus sometimes adjacent to areas of abnormal tympany. This finding was present in 12 per cent of the group.

LABORATORY FINDINGS

Gastric acidity was frequently determined and was within normal limits in all patients excepting those with known peptic disease.

Hemoglobin determinations and stool guaiac examinations confirmed signs and symptoms of blood loss. Significant anemia with hemoglobin below 11 Gm% was present in 27 per cent of all patients with hiatus hernias. Two out of four patients with short esophagus had low hemoglobin levels. Two of the five patients with paraesophageal hernias were anemic. Fifteen of the 63 patients with sliding hernias (24 per cent) fell into this same group. The patient with the esophago-aortic hernia was not anemic.

X-RAY FINDINGS

A presumptive diagnosis of diaphragmatic hernia can often be made on the standard chest x-ray film. The most important diagnostic tool however is the barium contrast examination. All patients in the present series, excepting some infants with foramen

of Bochdalek hernias, were thus studied. A barium enema was found to be of occasional positive value, demonstrating herniation of the large bowel or distortion secondary to omental herniation, especially in the Morgagni type of hernia.

Other special studies were sometimes required when no air-containing viscus was demonstrable in the hernia. Pneumothorax and pneumoperitoneum were occasionally induced, particularly to demonstrate the site of hernias through the foramen of Morgagni or Bochdalek in the adult.

ESOPHAGOSCOPY

Esophagoscopy was performed in 26 per cent of patients who had hiatus hernias. In these 19 patients the radiologic diagnosis of hernia could be confirmed in 72 per cent and that of esophagitis in 46 per cent.

COMPLICATIONS

Esophagitis occurred exclusively in patients with sliding and short esophagus type hernias. It was found in 19 of these (29 per cent) as diagnosed by x-ray and/or endoscopy. Heartburn and substernal pain each were described in 12 of these patients. Eight of the nineteen had also bled.

Total obstruction and incarceration occurred once each. Strangulation or spontaneous perforation did not occur in this series. However, one patient with a sliding hernia sustained a perforation during esophagoscopy.

TREATMENT

The hiatus hernias in this series were treated with one or several of the three available means of management—medical, operations on the phrenic nerve and surgical repair of the hernia.

Attempts to reduce reflux and distension (by the use of the Fowler position and small meals), the control of acidity by bland diets, antacids and parasympatholytic drugs, and weight reduction constituted the basic medical program. It was used in 10 patients (13 per cent), who either had small, uncomplicated and relatively asymptomatic hernias, or were extremely poor operative risks.

Paralyzing the diaphragm on the side of herniation has long been known to diminish or abolish symptoms of diaphragmatic hernias in some cases, particularly in the hiatus types. In this series phrenic nerve interruption was employed only in symptomatic patients, who could not tolerate the major surgical procedure or refused it. Eighteen patients (25 per cent) with hiatus hernias were treated with phrenic crush and/or avulsion as the primary means of therapy. Phrenic crushing was performed first and if good relief of symptoms ensued the nerve was avulsed when symptoms recurred. All patients who had phrenic operations were instructed to follow a medical regimen.

Phrenic crush was also utilized in combination with transthoracic repair of hernias when an inadequate length of esophagus necessitated transplantation of the hiatus anteriorly, with residual stress on the diaphragmatic suture line.

Surgical reduction of the herniated organs, excision or plication of the peritoneal sac and repair of the diaphragmatic defect constituted the definitive treatment for diaphragmatic hernias. Since careful dissection and approximation of the crura of the diaphragm was considered essential, repair was ordinarily accomplished through the chest. However, pulmonary contraindications, and the association of reparable abdominal conditions sometimes made the trans-abdominal approach more desirable. Forty-five patients (62 per cent) had definitive repairs performed. Of these 40 were approached through the chest and five through the abdomen.

COMPLICATIONS OF SURGICAL REPAIR

Three hospital deaths occurred in the group operated upon, a mortality of 6.7 per cent. Two deaths were due to massive pulmonary embolism and one to an early postoperative myocardial infarction. Two of the deaths occurred after transabdominal repair, and one after transthoracic operation. Other complications are charted in Table IV.

TABLE IV

Postoperative complications in 45 pts. having major repairs.	
Thrombophlebitis	5
Pleural effusion requiring thoracentesis	4
LLL pneumonitis	2
Myocardial infarction	1
Staphylococcal	
pneumonitis	1
empyema	1
Pleural-costal hernia requiring repair	1

RESULTS

The average follow-up of the patients with hiatus hernias was 2.7 years and was over one year in 74 per cent. Information was obtained from follow-up visits to the hospital or by questionnaire to the many referring physicians.

Medical Treatment

Of the 10 patients thus treated one bled while still on therapy, the others developed no complications during the period of follow-up. All experienced some relief of symptoms, four becoming actually symptom-free. Three of these patients had been greatly overweight and had reduced considerably.

Phrenic Operations

The evaluation of the phrenic operations is difficult in terms of the final outcome, because of the

usually reversible diaphragmatic paralysis. On the whole initial results were good, both as to control of symptoms and prevention of further complications. Of 15 patients with adequate follow-up only four failed to have complete or almost complete control of symptoms in the period immediately following phrenic crush. Failure of therapy in these patients was manifested by bleeding in two and the persistence of symptoms in all four. In the group immediately improved by the operation recurrence of symptoms coincided approximately with regeneration of the nerve and resumption of diaphragmatic activity. Symptoms recurred on the average after 7 months, the range being three to 12 months.

Surgical Repair

At the time of latest report 29 patients (64.4 per cent) of the group operated upon were asymptomatic. Seven (15.4 per cent) had minimal symptoms, without evident recurrence. The majority of these patients complained of occasional pain as their only symptom. This may have been a sequel of thoracotomy, in some instances. Four patients (9.1 per cent) had moderate symptoms, with one demonstrated recurrence. This patient was subjected to a phrenic crush two years postoperatively and obtained good relief from this procedure. Severe symptoms (unaltered from the preoperative status) were present in two patients (4.4 per cent). Both had demonstrable recurrences of the hiatus hernia. Good control of symptoms was achieved by a secondary repair in one and by a left phrenic crush in the other.

The overall recurrence rate in the series is not known. Barium studies were performed in all patients prior to their discharge from the hospital after operation. Two patients had small recurrences demonstrable. Both were asymptomatic then and have remained so. For obvious reasons late barium studies have been performed only in the presence of symptoms. Recurrences were demonstrated in the three symptomatic patients mentioned above, as well as the two early asymptomatic ones. Three of these five patients had had transabdominal hernia repairs done by several surgeons. Only two recurrences were observed in 40 transthoracic operations.

Two patients had esophageal strictures requiring postoperative dilatations. Both these patients had esophagitis diagnosed prior to operation.

DISCUSSION

The finding of an asymptomatic diaphragmatic hernia in the course of a gastrointestinal x-ray study done for other reasons is a frequent occurrence. Since special efforts (Trendelenburg position, Valsalva maneuver) are necessary to demonstrate some hernias many others must be missed. Rarely is a

regular attempt made at post-mortem examinations to discover small diaphragmatic hernias. Thus no accurate estimate can be made of the incidence of this condition in the population, or in hospital deaths. However, it can be stated that many must be completely asymptomatic, and many more elude diagnosis because of the protean nature of the symptomatology. The fact that almost one-half of this present series had bleeding suggests that complications rather than the presence of the hernia alone leads to its discovery.

Esophagitis has long been thought to be the most important cause of symptoms in hiatus hernia. In some ways this concept is supported by the present study. There is a remarkable similarity of clinical manifestations among the entire series and those with known esophagitis (Tables II and III). However, only 26 per cent of patients with hiatus hernias had esophagitis demonstrable by x-ray and/or esophagoscopy. Even if the condition was overlooked occasionally it cannot be assumed that it was present in all patients. One can only say that the manifestations of hiatus hernia and of esophagitis complicating hernia are very similar, but in the absence of this complication hernia can and does give rise to a classic clinical picture.

The occurrence of symptoms in hiatus hernias certainly seems independent of the degree of gastric acidity present.

Hiatus hernias are not always stressed sufficiently in discussions of upper gastrointestinal bleeding. Forty-four per cent of the patients presented with hemorrhage as one of their symptoms—in 16 per cent it was the only symptom. Although the bleeding seldom was massive and sudden, the hemoglobin in 27 per cent of the patients was significantly depressed.

Obesity must again be emphasized as an important factor in the genesis of hiatus hernias and their symptoms. Weight reduction will often afford relief by itself and will increase the ease and safety of subsequent operation, as well as improve the operative end results in the obese patient. Therefore it should be made an integral part of all therapeutic regimens for diaphragmatic hernias.

The results of operative treatment were similar to those in other reported series. The high recur-

rence rate in the patients operated on transabdominally is not considered statistically significant. In several of these the hernia repair was incidental to other major interventions.

SUMMARY

1. One hundred consecutive patients with diaphragmatic hernia were reviewed.
2. Seventy-three of these had hiatus hernia, and formed the subject of this report.
3. Digestive disturbances (68 per cent), pain (67 per cent), bleeding (44 per cent) and obstruction (33 per cent) were the most frequent symptoms in the hiatus types of hernia.
4. Esophagitis was demonstrated in one-quarter of the 73 patients. The symptoms in this group did not differ materially from those in the rest of the hiatus group.
5. Treatment was predominantly surgical, consisting of direct repair in 45 patients (62 per cent), and phrenic nerve interruption in 18 patients (25 per cent). Ten patients were treated medically (13 per cent).
6. Phrenic nerve operations gave good symptomatic relief in most cases when repair could not be undertaken. However, the improvement was limited by the variable duration of the diaphragmatic paralysis.
7. There were five known recurrences in the group having had operative repairs of hiatus hernias (11 per cent). Three of these patients required further treatment because of symptoms. Only two of 40 transthoracic repairs, or five per cent, had a known recurrence.
8. The importance of hiatus hernias as sources of upper gastrointestinal hemorrhage and of obscure anemias is emphasized.

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Cancer Proneness

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Is there such a definite entity as cancer proneness? A case of four separate primary lesions of carcinoma antedated later in this article is strongly suggestive of such a possibility. The earliest mention in medical literature regarding this condition was an article on multiple primaries published by Billroth⁶ in 1869. The first American review of the literature was by Major⁴ in 1918. Since then there have been numerous articles discussing this subject and its potentialities. Cahan, Butler, Watson and Pool² demonstrated multiple primaries in association with lung cancer. Goodner and Watson³ showed a very high incidence of head and neck cancer associated with esophageal malignancy. Wallace⁷ shows that cancer of the breast in association with cancer of the cervix, corpus uteri, or ovaries occurs more commonly than accounted for by chance alone. He further states that if the person is less than fifty years old, she will develop her second tumor within two years of the first. Pack⁵ has argued for bilateral mastectomy because of the high incidence of a second primary in the remaining breast. Warren and Gates⁹ in 1932 and again Warren and Ehrenreich⁸ in 1944 demonstrated the incidence of multiple cancer is greater than expected based on chance alone. They further suggested the tendency of a patient to develop a second primary be considered eleven times greater than a patient without cancer developing his first lesion. Berger¹ in agreeing with him further concluded that there is an inherent susceptibility to cancer possessed by a portion of the population. It does not appear that the degree of malignancy, however, is related to multiplicity.

In view of this, the authors not only wish to publish this case to add to those already in the literature, but they would also like to re-emphasize this problem of multiple primaries.

This patient, a white male, had his first experience with a malignant disease when he was sixty years of age. He was admitted to the Hartford Hospital in Hartford, Connecticut in June 1943 where transurethral resection of his prostate was performed. Histological identification of adenocarcinoma was made on the surgical specimen. He was

treated by a bilateral orchidectomy. He was admitted to St. Francis Hospital, Hartford, Connecticut in October 1944 with intestinal obstruction. Laparotomy for large bowel obstruction revealed two separate tumors; a distinct carcinoma of the splenic flexure as well as a distinct carcinoma of the hepatic flexure. A wide resection of each of these tumors was accomplished at this time. The patient then enjoyed life, free of any disturbances until the next admission to St. Francis Hospital in November 1956. A laparotomy performed at that time revealed an obstruction to the second portion of the duodenum from a carcinoma of the head of the pancreas. This, unfortunately, had advanced beyond the state of any possible resection. A posterior gastroenterostomy and cholecystojejunostomy was performed for palliation. His general condition remained well for approximately seven months when it began to deteriorate. He had approached the terminal stages of his disease by the time of the last and final admission in November 1957. Autopsy revealed the major cause of death to be due to this fourth and final carcinoma. Interestingly enough, examination of the sites of his three other primaries failed to suggest any evidence of tumor in those areas. In summary, this patient during a thirteen year span of his life experienced four separate, distinct and lethal neoplasms. Three of these he seemed to have conquered insofar as demonstrated at autopsy. The fourth primary, the carcinoma at the head of the pancreas, had progressed beyond surgical cure at the time of its recognition.

Not only is it important to have frequent head and neck examinations in patients suffering from esophageal carcinoma, interval and careful examination of the remaining breast following mastectomy, etc., but we should practice the same principle in dealing with other forms of cancer. We are probably not optimistic enough in our thoughts of the results of our initial surgery, so much of our attention is devoted to the inspection of those areas where recurrence or metastases are more likely to appear. This is more probable than our watching out for the development of a secondary lesion until its manifestations have become that of a late case. This is even more true after our patients have sur-

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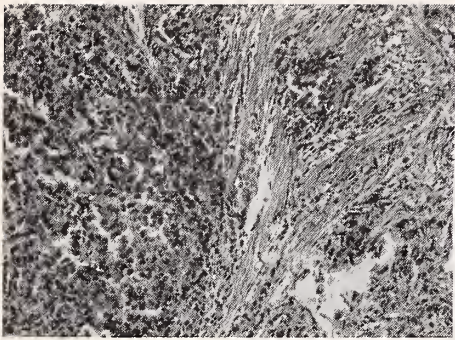


FIGURE 1

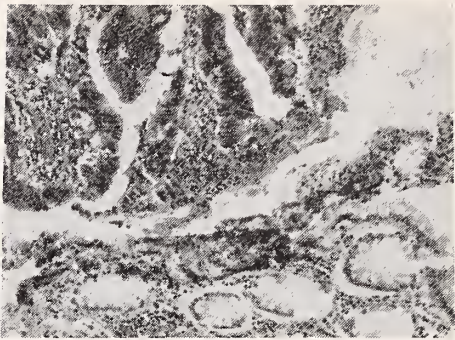


FIGURE 2

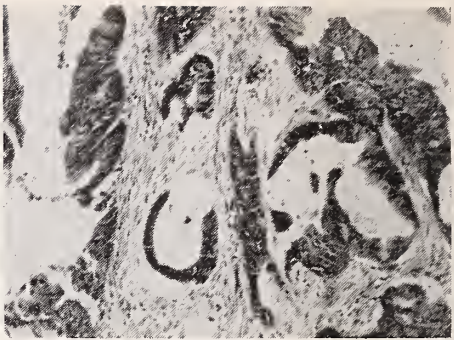


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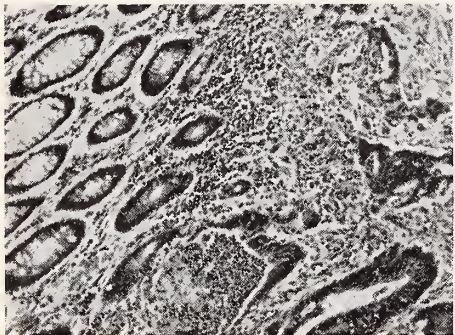


FIGURE 4

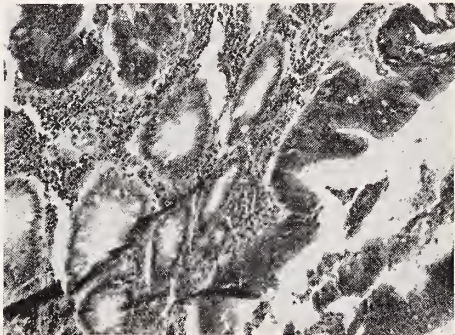


FIGURE 4a

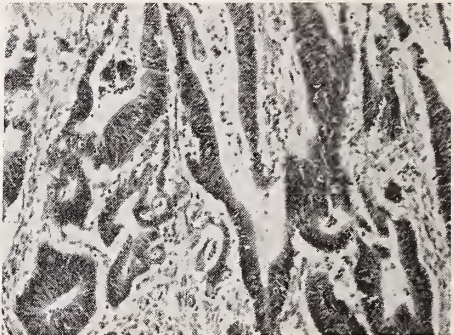


FIGURE 5

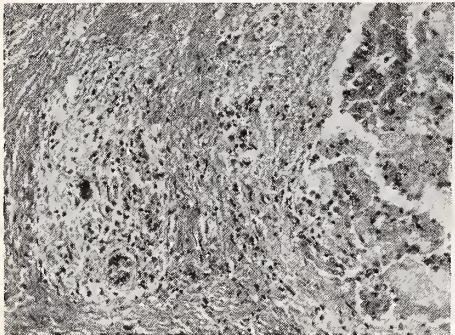


FIGURE 6

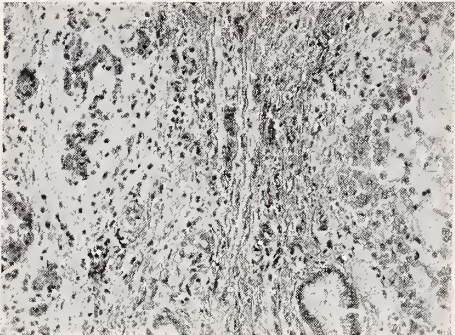


FIGURE 7

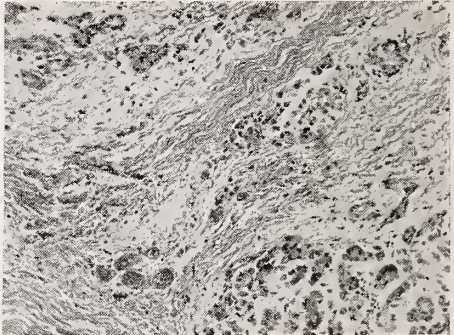


FIGURE 8

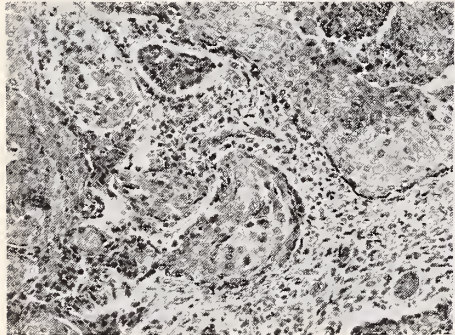


FIGURE 9a

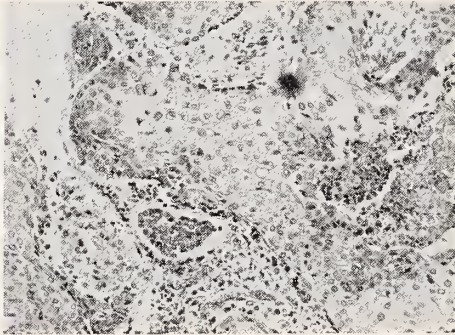


FIGURE 9b

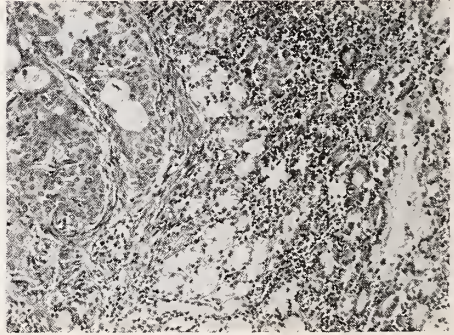


FIGURE 9c

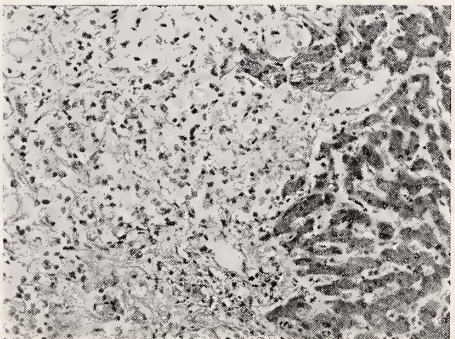


FIGURE 10

vived that magic, yet not actually realistic yardstick of five years free of disease, post initial therapy. The optimistic reassurance this latter group receives should be tempered by the physician's request for the continued interval examinations in the light that such people may fall into the so-called cancer prone group. We are sure there will be continued salvage in this group, as long as they can come under medical care when their secondary or multiple primaries are still in the early stages. It is this thought that we would like to emphasize in the light that we do have a clue towards the early detection of cancer, i.e. these patients are more prone to develop cancer than those who are fortunate enough not to be in this class.

Sections of the prostate (Figure 1) with infiltrating carcinoma which maintains a glandular pattern. Note the uniformity of the gland pattern in contrast to that in Figure 2 which shows the junction of the normal bowel mucosa and the hyperchromatic carcinoma cells which still show gland formation in the depths of the tissue (Figure 3). This latter is from the proximal of the two lesions of the colon. Figures 4, 4a, and 5 are corresponding views of the third carcinoma in the more distal portion of the colon. Since all these photomicrographs are taken at the same magnification (app. 600 X), the cell and nuclear sizes are all directly comparable. The further illustrations are from the pancreatic lesion showing the carcinoma in the head of the pancreas (Figures 6 and 7), its extension into the tail of the pancreas (center of Figure 8) and its extension into the ampulla of Vater (Figure 9a) with squamous metaplasia of the tumor; its appearance in the lumen of the duodenum (Figure 9b) and its invasion into the mucosa of the duodenum near Brunner's glands in Figure 9c. Figure 10 shows the carcinoma cells, metastatic in the liver and without the metaplasia seen in the intraduodenal portions of the extension of the tumor; compare Figures 6, 7, and 8.

SUMMARY

1. A case of four separate primary lesions of carcinoma have been presented.
2. Philosophy of cancer proneness has been discussed with the emphasis on salvaging more of these by repeated alertness of the increasing numbers being noted in the medical literature.

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Hypothalamic – Pituitary Relationships

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THE proper regulation of physiological functions by hormones requires that they be secreted in adequate amounts and proportions to meet the varying needs of the body. This implies that the rate of secretion is variable and is adjusted by a mechanism responsive to the varying circumstances encountered by the organism. Current views indicate that both neural and humoral factors are intimately concerned with the regulation of pituitary activity; however, their relative importance, as well as the pathways and mechanisms involved, are incompletely known.

Evidence has been accumulated suggesting that the anterior pituitary is under the control of the central nervous system. For example, the sexual rhythm of many vertebrates is adjusted to seasonal variations and light exposure has been shown to be an important stimulus to the sexual processes of certain animals. Observations in man have also shown that environmental changes and emotional factors may modify the normal menstrual rhythm and tumors or lesions in and about the hypothalamus are associated with both hypofunction and hyperfunction of the anterior pituitary and its target glands. Since hypothalamic lesions have been implicated in numerous adenohypophyseal endocrinological disturbances, an interrelationship is believed to exist between the hypothalamus and anterior pituitary gland. An understanding of present concepts concerning these relationships is becoming increasingly important in modern clinical medicine.

INNERVATION AND BLOOD SUPPLY TO ADENOHYPOPHYSIS

The adenohypophysis receives relatively few nerve fibres and those passing to the gland appear to be associated with the vascular supply and not with the secretory cells directly. It is generally agreed that the anterior pituitary is devoid of secretory nerve fibres; therefore the mechanisms of regulation must be attributed to humoral factors that reach the gland through its blood supply. The blood supply to the anterior pituitary gland is unique inasmuch as branches of the internal carotid not only penetrate directly into the substance of the gland, but also enter the median eminence of the

hypothalamus. These latter branches break up into a capillary network which reunites to form portal vessels that run down the pituitary stalk for varying distances before breaking up again into a second capillary network that supplies the secretory cells. This dual type of blood supply offers two different opportunities for a humoral agent to reach the anterior lobe: (1) first, it places the secretory cells in contact with any agent which has entered the systemic blood at distant parts of the body; (2) secondly, the portal system constitutes a vascular link between the pituitary and any nerve fibres whose axons terminate in the median eminence of the hypothalamus.

GENERAL VIEWS OF PITUITARY REGULATION

The present views as to the general nature of the regulation of the secretion of the anterior pituitary hormones, including ACTH, fall into three groups.

(1) Absolute Control by Central Nervous System:

This hypothesis suggests that the circulatory contact between the median eminence and the anterior lobe via the hypophyseal portal system of blood vessels is an essential element in the normal secretory activity of the anterior lobe. This is supposed to be effected by means of a humoral agent, of an unknown nature, that is liberated in the region of the median eminence by the terminal axons of certain hypothalamic cells. This agent then enters the portal system of blood vessels and is carried to the anterior lobe cells where it activates the secretion of hormones. While such a regulatory mechanism could account for the rapid release of ACTH, particularly in response to nervous stimuli, its absolute essentiality for ACTH secretion under all conditions is still a matter of doubt. In addition, since the anterior pituitary secretes at least six hormones, the question is raised whether all these hormones are under the control of a single transmitter or whether there are as many discrete hypothalamic centers and neurohumoral transmitters as there are anterior lobe hormones.

(2) Feedback Mechanism by Blood Level of Target Organ Hormones:

The second view of the regulatory mechanisms, while not denying the existence of the first, postulates that the blood level of the hormones of the

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target organ, (in the case of ACTH the adrenal steroids), is an important factor in itself. Evidence has been advanced to suggest that an inverse relationship exists between the concentration of target gland hormones in the blood and their respective pituitary trophic hormones. A fall in the blood level of adrenal steroids serves as an excitant to anterior lobe secretion of ACTH; a fall that could be brought about by increased tissue utilization of these hormones. It is still undetermined, however, whether such a fall directly excites the anterior lobe itself or whether it serves to activate the nervous elements in the hypothalamus. This point of view does not rule out control by the central nervous system, for if the locus of action of the adrenocortical hormones proves to be the central nervous system, then the essentiality of the hypothalamic-hypophyseal connection for ACTH secretion under all conditions would be greatly strengthened.

(3) Both Neural and Hormonal Feedback Control:

The third point of view is a compromise or "middle of the road" hypothesis that incorporates a little of both of the previous hypotheses. The proponents of this concept believe that a basal secretion of pituitary hormones is determined by the target gland hormone concentration in the blood; however, a rapid, acute elevation of hypophyseal hormones is dependent upon an intact neurovascular connection between the hypothalamus and the anterior pituitary gland.

EXPERIMENTAL INVESTIGATIONS ON REGULATION OF PITUITARY GLAND SECRETIONS

Emphasis will be placed on the mechanisms regulating ACTH secretion since methods are presently available that enable us to detect rapid and small changes in the level of this secretion. Studies of the regulation of ACTH secretion are part of the larger problem of the manner of regulation of the secretion of all the anterior pituitary hormones since there probably exists a pattern of regulation that is common to all the anterior lobe hormones.

Various methods have been used in an effort to determine the extent of central nervous system control over pituitary secretions. A clear understanding and appraisal of the different approaches to this problem is necessary in order to appreciate the development of the concepts regarding the relationship between the hypothalamus and the pituitary.

(1) Stalk Section

Early attempts were made to separate the pituitary gland from the hypothalamus by means of hypophyseal stalk section. These studies, carried out for the purpose of defining the role of the hypothalamo-hypophyseal routes in the regulation of

pituitary function, gave conflicting results initially. A temporary cessation of pituitary activity was observed which was associated with generalized atrophy of the target glands. However, pituitary function frequently returned to near-normal after a period of time had elapsed. It was subsequently shown by Harris that section of the stalk causes only a temporary interruption of the portal vessels and that they begin to regenerate within 24 to 48 hours in the rat.¹ To overcome this factor, Harris and co-workers showed that when a paper plate was interposed to prevent regeneration of the portal vessels after stalk section, the pituitary activation associated with emotional stress was abolished.

The results obtained with stalk section are difficult to interpret since it is still uncertain whether failure of pituitary function is the result of interference with the passage of a humoral agent from the hypothalamus to the pituitary or whether pituitary dysfunction is the result of ischemia consequent to interruption of the portal blood supply.

(2) Pituitary Transplants

Another technique used with considerable success is an evaluation of the growth and function of pituitary transplants in various regions of the body. Harris and Jacobsohn² found that pituitary tissue transplanted to the temporal lobe of the cerebral cortex was not functional, whereas when anterior pituitary tissue was placed under the tuber cinereum of the hypothalamus in hypophysectomized rats, the graft became vascularized by hypophyseal portal vessels, and normal function was regained in the majority of animals. These results offered strong support for the view that the secretion of ACTH was dependent upon hypothalamic control mediated by the hypophyseal portal vessels.

On the other hand, McDermott and colleagues,³ and Fortier, et al⁴ have clearly demonstrated that hypophysectomized rats, bearing ocular or intrasplenic pituitary transplants, responded to certain stress stimuli with liberation of ACTH. In addition, the weights of the target glands were partially maintained by these hypophyseal transplants. In the light of these facts, activation of anterior pituitary function seemed to be entirely independent of hypothalamic-hypophyseal participation. However, the question as to whether there exists a hypothalamic neurohumoral transmitter passing from the median eminence to the anterior lobe cannot be entirely settled by these transplant experiments, since even in a remote site the grafts might still be influenced by a systemic circulatory passage of a humoral agent. It is conceivable that intense stimuli could cause the liberation of sufficient neurohumor from the hypothalamus into the systemic

circulation to stimulate the "isolated" transplanted pituitary.

(3) In Vitro Experiments

Several investigators have employed in vitro techniques in an attempt to study the factors and substances which cause the release of ACTH from an isolated pituitary system. In the simplified in vitro systems, bits of neural tissue are incubated with anterior pituitary tissue and the effect on ACTH release is demonstrated by the resultant concentration of ACTH in the medium. These techniques have been widely used by Guillemin et al.⁵ and Saffran et al.⁶ The validity of these in vitro methods has been seriously questioned by several investigators, including Fortier et al.⁷ and Barrett et al.⁸ since only the medium is assayed for ACTH concentration. The pituitary contains appreciable stores of ACTH and release of this hormone can be a non-specific result of changes in permeability brought about by substances added to the medium. Also, certain materials which are tested for corticotrophin releasing effects are capable of inhibiting ACTH destruction in the medium. The net synthesis of ACTH by the in vitro pituitary remnant has yet to be demonstrated before the in vitro results are accepted without question.

(4) Chemical Blockade

Certain chemical agents are known to inhibit the pituitary response to a wide variety of stressful procedures. This observation has been used to study corticotrophin releasing factors, and is based on the assumption that the inhibition is at the hypothalamic level and not on the pituitary directly. The most widely used inhibitory agents are the adrenal steroids and the combination of barbiturate and morphine. Several objections may be raised by the use of these agents: the specificity of the steroid blockade or the barbiturate-morphine blockade has not been established; the inhibition of pituitary response is relative, depending upon dose of drug employed and intensity of stimulus.

(5) Hypothalamic Lesions

Certain discrete electrolytic lesions in the area of the hypothalamus have been shown to prevent the release of ACTH in response to acute stress. At present, the hypothalamic-lesioned laboratory animal is the animal of choice in the study of corticotrophin-releasing factors (CRF) or neurohumors believed to originate in the hypothalamus. This technique offers the opportunity to establish regional specificity by the use of small discrete lesions in various parts of the central nervous system. Electrolytic lesions in the hypothalamus can interfere with the ability of the organism to release large amounts of pituitary hormones rapidly under cer-

tain conditions. This has been demonstrated by many investigators even though there is as yet no general agreement with respect to the specific area involved in this control. In most cases, however, the presence of an effective hypothalamic lesion does not result in atrophy of the target glands. Therefore it must be presumed that a basal secretion of pituitary hormones is still present in order to maintain the weights of the target glands under pituitary control. If this assumption is correct, it indicates that more than one avenue must be available for the maintenance of pituitary secretions. Recent investigators^{9,10,11,12} have indicated that the most effective lesions appear to be those that involve the median eminence to a greater or lesser extent. However, it is in this region that the point of contact between the nervous and vascular elements is believed to occur. Therefore, it is still uncertain whether such lesions are effective because (a) they prevent the passage of a humoral agent from the hypothalamus to the gland, or (b) they reduce the blood supply to the anterior pituitary gland.

IDENTITY OF NEUROHUMORAL AGENT

Since it is generally agreed that the secretory activity of the anterior lobe of the pituitary can only be affected by humoral means (portal or systemic), much work has been done in an attempt to identify the particular agent or agents concerned. Several investigators have reported experiments to indicate that vasopressin is involved in the activation of the anterior pituitary.^{13,14} However, their evidence must be accepted with reservation since the purity of the vasopressin has been questioned, the dose required to elicit an effect is extraordinarily large and unphysiologic, and elevation of corticosteroid concentration is not necessarily associated with an increase in ADH (anti-diuretic hormone) activity.

Pituitary activating substances have been isolated by fractionation of hypothalamic tissue,^{15,16} posterior pituitary tissue,^{16,17} and to a lesser extent from other regions. These substances are currently being analyzed and chemically identified and their effects on biological processes are under investigation in both in vitro and in vivo systems.^{16,17,18} The specificity of these agents in their role as regulators of pituitary activity has not yet been firmly established. In fact, most of the experiments in this field of study are based upon the assumption that there is a specific neurohumor which originates in the hypothalamus; however no such substance has as yet been discovered, and its existence still remains hypothetical.

CONCLUSION

From this brief survey of the mechanisms regulating hypophyseal secretions, it becomes apparent

that no single factor exerts complete control over anterior pituitary activity. Indeed, it is almost certain that more than one pathway is available, under a wide variety of circumstances, to meet the needs of the organism for additional amounts of pituitary hormones. This is not surprising in consideration of the importance of these hormones in maintaining the vital functions of the body.

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Heart-Lung Machine Used In Cancer Treatment

A new treatment for at least one type of cancer, involving the use of a heart-lung machine and a chemical, was described by three Tulane university physicians.

Writing in the current *Journal of the American Medical Association*, Drs. Oscar Creech Jr., Robert F. Ryan, and Edward T. Krementz, New Orleans, said they have used the technique to treat 41 cases of malignant cancer, including eight of melanoma.

Melanoma is a malignant and rapidly fatal tumor resulting from excessive growth of the pigment-containing cells in the skin. Often beginning as a mole which undergoes rapid change, the cancer spreads rapidly to other parts of the body through the blood and lymph systems. This characteristic makes it difficult to treat.

The cases of melanoma were treated with a heart-lung machine and phenylalanine mustard, an analogue of nitrogen mustard, a fairly common cancer treatment drug.

One of the problems of both phenylalanine mustard and nitrogen mustard is their severe side effects, especially the depression of blood cell production by the bone marrow.

These side effects can be avoided through the use of a heart-lung machine, the doctors said. They explained how they used it in the treatment of melanoma of the lower extremities.

The normal blood flow to the leg is shut off from the rest of the body, and a separate circulatory system is set up for the leg by attaching the heart-lung machine to an artery and a vein. (The machines generally used in heart surgery maintain circulation and oxygenation.) After the machine is operating, phenylalanine mustard is injected into the artery and allowed to circulate through the leg.

The isolation of the tumor-bearing area prevents the spread of the chemical throughout the body, thus reducing the chances of side effects. In addition, the chemical is concentrated in the affected area, thereby increasing its effect on the tumor.

Treatment Of Parkinsonism

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A DISORDER of the nervous system characterized mainly by muscular rigidity, alternating tremor, slowness of movement (akinesia) and flexion postures, was first described in detail by James Parkinson in 1817,¹ and is now known as parkinsonism or paralysis agitans. It is produced by lesions in the extrapyramidal system: the basal ganglia and associated nuclei, and appears as a disease of unknown origin (idiopathic), or due to a variety of causes, mainly post-encephalitic and cerebral arteriosclerotic, and less commonly poisoning by carbon monoxide and manganese, cerebral trauma and tumor. In recent years, the syndrome of parkinsonism has been produced by high dosage administration of certain tranquillizing drugs, especially those in the reserpine and phenothiazine (i.e. chlorpromazine) groups, and is reversible after discontinuation of the drug.

The present day treatment of parkinsonism remains symptomatic, and under average conditions, well-managed therapy may effect a 35 per cent to 75 per cent reduction in symptoms, especially rigidity and tremor. The treatment program involves the use of pharmacologic agents, physical therapy and supportive psychotherapy.^{2,3} In certain selected cases special neurosurgical procedures may be utilized. The following is an outline of these approaches to treatment in parkinsonism. The key-stone is a good patient-physician relationship.

Therapy with Belladonna and Related Alkaloids

1. Hyoscine (scopolamine)
Dosage: 1/200 gr. (0.3 mg.), 1/150 gr. (0.45 mg.), 1/100 gr. (0.6 mg.)
Effects: A good general drug, especially for tremor.
Side-reactions: Drowsiness, dryness of mouth, blurred vision, "dizziness".
Comments: Use smaller doses for older patients.
2. Stramonium
Dosage: Pills of Stramonium Leaves, 2½ gr.
Effects and Side-reactions: As above.
3. Atropine
Dosage: Solution (0.5%): 2-3 drops t.i.d. to 10 drops t.i.d.

Effects: Useful for rigidity and oculogyria.

Side-reactions: Dryness of mouth, blurred vision, nausea, "dizziness", psychotic reactions, diminished gastro-intestinal tract tonus.

Comments: Not tolerated well in older patients. Danger in glaucoma.

4. Vinobel (mixed alkaloids)

Dosage: 0.4 mg., 0.8 mg.

Effects: As with atropine.

5. Rabellon (mixed alkaloids)

Dosage: 0.5 mg.

Effects: As with atropine.

Vinobel and Rabellon are better tolerated in older patients than atropine.

Therapy with Synthetic Anti-spasmodics

1. Artane (trihexyphenidyl) (also Pipanol)

Dosage: 2 mg., 5 mg., Elixir (4 cc. = 2 mg.).

Effects: Very useful for rigidity, minor tremor, oculogyria, inertia and bradykinesia.

Side-reactions: Dryness of mouth, blurred vision, nausea.

Comments: Valuable in older patients. Good combination: Artane in 3 or 4 doses daily, hyoscine in 1 daily dose.

2. Pagitane (cycrimine)

Dosage: 1.25 mg., 2.5 mg.

Effects and Side-reactions: Similar to Artane.

Comments: Tolerated least well by arteriosclerotics.

3. Kemadrin (procyclidine)

Dosage: 5 mg. (scored).

Effects: Similar to Artane on rigidity, tremor and bradykinesia.

Side-reactions: Similar to but less than Artane.

Comments: Tolerated well by older patients. A good basic drug.

4. Cogentin (benztropine)

Dosage: 2 mg. (scored).

Effects: Effective against rigidity and tremor. More prolonged action than other drugs.

Side-reactions: Dry mouth and throat, lassitude, blurred vision, dermatitis.

Comments: May be taken only once daily, on retiring. Useful with Artane.

5. Diparcol (diethazine)
Dosage: 62.5 mg., 250 mg.
Effects: Mainly on rigidity.
Side-reactions: Often severe. Granulocytopenia.
Comments: Not recommended.
6. Parsidol (Lysivane, ethopropazine)
Dosage: 10 mg., 50 mg.
Effects: Mainly on tremor, occasionally on rigidity.
Side-reactions: Similar to Artane, but more common. Danger in glaucoma.
Comments: More effective when combined with Artane, hyoscine or benadryl. Supersedes Diparcol.
- ✓ 7. Panparnit (caramiphen)
Dosage: 12.5 mg., 50 mg.
Effects: Partially on rigidity and tremor.
Side-reactions: More toxic than other drugs: nausea, vomiting, dry mouth, visual blurring, "dizziness".
Comments: May be useful in younger post-encephalitics who are able to tolerate it.

Therapy with Synthetic Anti-histamines

1. Benadryl (diphenhydramine)
Dosage: 25 mg., 50 mg.
Effects: Partially on tremor and rigidity when combined with other drugs (especially Artane and hyoscine).
Side-reactions: Somnolence, confusion, "dizziness", blurred vision. The sedative effects may be useful in some instances.
N.B. Most patients with parkinsonism, especially in the other age group, do not tolerate barbiturates.
2. Thephorin (phenindamine)
Dosage: 25 mg.
Effects: As with benadryl above.
Side-reactions: Transient gastro-intestinal upsets, insomnia, rare psychotic reaction.

Therapy with Synthetic Cerebral Stimulants

1. Dexedrine (dextro-amphetamine)
Dosage: 5 mg., 10 mg. or 15 mg. spansule (long-acting).
Effects: Useful for akinesia, lethargy, narcolepsy, and in counteracting the sedative effects of other drugs.
2. Ritalin (methylphenidate)
Dosage: 5 mg., 10 mg., 20 mg.
Effects: As with dexedrine above, although somewhat milder in overall action.

Therapy with Synthetic Muscle Relaxants

These drugs, such as Tolserol (mephenesin), Flexin (zoxazolamine), Robaxin (methocarbamol) and Trancopal (chlormethazanone) have been only

of very limited usefulness against the tremor and rigidity of parkinsonism. Either Robaxin (500 mg., t.i.d.) or Trancopal (100 mg., t.i.d.) may be tried as the most effective of the group.

Physical Therapy

This is important in every case of parkinsonism, as regular treatment but not necessarily formally. Moderate physical activity is necessary. Enforced rest is not particularly helpful and may even enhance rigidity. Exercises should include every part of the body, and be especially for gait, posture, knee action and facial movements. Valuable, inexpensive gadgets to be used are: vibrators, sponge balls, arm springs and overhead pulleys. Other necessary aids may be: entirely zippered clothing, shoes without laces, special eating utensils. Occupational therapy should be utilized often. Occasionally speech therapy may be helpful.

Supportive Psychotherapy

The physician must provide the patient with a rational orientation and adjustment with regard to his illness and the new relationships to his environment. An optimistic, hopeful attitude is necessary by the physician, the relatives and other associates of the patient. Yet, the nature of the disease and its significance to the life of the patient should be explained. The long duration of the illness, its slow progress or steady plateaus, and responsivity to early intensive pharmacologic and physical therapy are points to be emphasized. No specific personality deviation occurs, although depression is frequent and may be handled by supportive attitudes, stimulant drugs and the general medical treatment program. Only infrequently is more intensive psychotherapy required.

Social activities should be restricted as little as possible. Activities and interests are best programmed into daily patterns. Stressful circumstances should be limited. It will be helpful to extend the time for such activities as dressing and eating. The overall amount and speed of work required may have to be limited gradually. Regular vacations or relaxation periods are advised.

Neurosurgical Therapy

In the past, the following neurosurgical procedures have been utilized: extirpation of areas 4 and/or 6 of the cerebral cortex, sectioning and/or extirpation of the head of the caudate nucleus, the anterior limb of the internal capsule and the oral third of the putamen and globus pallidus, section of pallidofugal fibers (ansa lenticularis), section of anterolateral portion of the cerebral peduncle, section of pyramidal tracts in the cervical cord. These procedures produced usually transient improvements in rigidity and tremor along with hemiparesis

and relatively high morbidity and mortality. More recently chemical destruction (using alcohol) of the globus pallidus and ventrolateral nucleus of the thalamus,⁴ chemopallidectomy and chemothalamectomy, has produced an apparent lasting significant relief of rigidity and tremor without significant hemiparesis in a certain number of selected patients. This method has superseded anterior choroidal ligation; however, other destructive techniques used have been focussed ultrasound and stereotaxic electrocoagulation.

The selection of patients for neurosurgical intervention remains difficult. At present these should be individuals under the age of 60, with severe parkinsonian rigidity and tremor, perhaps mainly unilateral, not responding to medical therapy. A

predominantly akinetic syndrome would be a contraindication. With these criteria, less than 20 per cent of patients could even be considered for operation. Further studies are necessary in the standardization of procedures, case selection and post-operative follow-up before final conclusions can be drawn.

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Physician From Britain Says American MDs Work Harder

Asked to expand his remarks about "two short and most enjoyable weeks as visiting physician to the Massachusetts General hospital," Dr. J. F. Stokes of London says that he believes that physicians in the United States emphasize "the acquisition of medical knowledge, the search for truth." This acquisition is one of two main objectives for doctors, and British physicians apparently emphasize the second objective: "... the relief and prevention of suffering in patients who come under his care."

The American resident puts in more hours and more work per day than his British counterpart. There is great hurry and drive among medical men in the United States, but the physician going into clinical practice should strive as much for breadth as for depth in education, while the laboratory career in its early stage does not demand as much breadth. However, in view of the fact that laboratory men seem to hold most of the most important positions, the young physician may become so inclined away from seemingly unrewarding clinical work that one may ask whether "the day of the clinician in American medicine is over." On the other hand, the established British clinicians must make sure to submit themselves to criticism and promote original thought and must be "actively protected from decay."

The task of the clinician is harder than ever; he is expected to and should be informed in an increasing number of corollary disciplines. But he might be helped if he didn't have to spend so much time in answering the "demand for printed evidence." Perhaps all journals might agree "to stop publication for six months every five years" in order to afford "time for reflection and time to decide whether there is room for both pointillisme and polysaccharides, and coproporphyrins as well as Copernicus, and whether Emile Zola's realism and the Zollinger-Ellison syndrome are mutually exclusive phenomena."

Others have probably observed American medicine for a longer period, says Dr. Stokes, commenting on the limitation of his experience. Referring to his comments, he adds that "conclusions drawn from small samples are notoriously unreliable." (*New England J. Med.* 260:69, January 8, 1959.)

Aspiration And Hypostatic Pneumonia Treatment With A Rocking Bed

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IN 1932 Eve first described a method for activating the inert diaphragm by gravity.¹ A year later, Eve and Killick described the use of a rocking method of artificial respiration in cases of drowning, stating that mucus was readily expelled from the air passages.² Other investigators have reported the use of Eve's rocking method for resuscitation at birth.^{3,4,5} In one of these reports Millen and Davies wrote that when the child's head was lowered the familiar thick mucus plug was expelled immediately through the nostrils.⁴ However, Lee reported that the rocking bed was useless in the absence of an open airway.⁷

Wright reported on the use of the rocking bed in poliomyelitis in 1947. She stated that where postural drainage was desired the bed could be fixed with the head lowered at any angle, and that movement of the bed improved circulation in the presence of decreased aid from the skeletal-muscle action.⁸ Various authors have written more recently about the rocking bed in the treatment of respiratory paralysis, but their papers have been mainly concerned with the technical aspects of ventilation.^{9,10,11}

Atelectatic pneumonia is frequently encountered in patients confined to bed for prolonged periods, elderly patients, and patients with weak gag or cough reflexes. Bandages or casts about the chest favor the condition. Circulatory failure, asthenia, or shock lead to the capillary congestion, stasis, and alveolar edema, which predispose to hypostatic pneumonia. The usual treatment includes antibiotics, rest, changing position frequently, semi-sitting positions, oxygen, and general supportive measures such as diet, fluids, etc.¹²

We have been impressed with the relatively low number of cases of hypostatic or aspiration pneumonia among post-polio patients at the Mary MacArthur Respirator Unit, (Wellesley, Mass.) where most patients spend a portion of the day on the rocking bed.

Because of this, we attempted to treat this patient's chronic aspiration and hypostatic pneumonia with the rocking bed.

CASE REPORT

D. T., a three year old white boy was admitted to our service on 11/23/56 for domiciliary care.

His mother, a diabetic, had had two other full-term pregnancies. The first child was stillborn; the second died a few days after birth. Both babies weighed well over twelve pounds at birth.

A few years later the patient was born weighing about twelve pounds. He experienced severe respiratory difficulty with convulsions during the neonatal period and his condition was diagnosed as "anoxic encephalopathy." During the next three and one-half years the patient convulsed during three or four different febrile illnesses.

About a month before transfer to us, the patient was admitted to another service, because of fever and convulsions. The convulsions persisted and the patient lapsed into permanent coma. Extensive work-up failed to reveal any underlying etiology and the patient did not respond to treatment.

At the time of admission to our service the patient was comatose and exhibited decerebrate rigidity. Coarse rhonchi and rales were heard over both lung fields. Gag and cough reflexes were present but weak and the pharynx was full of mucus. This mucus problem and associated rales and rhonchi had developed during the first week of the illness.

For the next five months he was maintained on a completely balanced diet consisting of Sustagen, Lytren, sugar, and water given via stomach tube.* The pulmonary condition persisted in spite of various antibiotics, suctioning, position-changing, and some postural drainage. About every two weeks there would be an exacerbation of this chronic pneumonia necessitating the use of oxygen with water vapor or alevaire. During the fifth month after admission urinary retention and abdominal distention became a problem. At the same time he developed pitting edema of the legs, arms, and sacral area.

At this time the patient was placed prone on a rocking bed, and while it rocked, one of us (J.B.) pounded lightly on his back to loosen inspissated

From the general pediatric service of Dr. Maxwell Bogin, Bridgeport Hospital, Bridgeport, Connecticut.

* Sustagen and Lytren supplied in part by Mead Johnson & Co.

mucus. Also pressure was exerted on his chest as the bed went into a head-down position to force pulmonary secretions towards the head. About a half cup of muco-purulent secretion was expelled through the mouth. Similar results were obtained when this rocking was repeated for a half hour twice daily until a house officer stopped treatment a few days later. By then the nurses had noted that the patient required much less oral suctioning than previously. The breath sounds were much clearer also.

Four days after the rocking bed had been stopped, although postural drainage was continued, the mucus problem returned and the lungs were again congested.

Again rocking bed therapy was begun. The patient now lay supine while he rocked for fifteen minutes twice daily. Within a few weeks the pulmonary condition had cleared, and the abdominal distention and edema had decreased considerably. After one month of rocking twice daily a chest x-ray was read as normal. (Two previous x-rays had been diagnosed as "pneumonitis and alveolar atelectasis.") The bi-weekly exacerbations of the chronic pneumonia ceased, and for the first time in six months the oxygen apparatus could be removed from the patient's bedside.

About six weeks after rocking bed therapy was begun the patient experienced a febrile episode of pneumonia. For the first time sputum cultures revealed a true pathogen, pneumococcus. Antibiotic treatment readily cured this pneumonia. When a repeat sputum culture revealed monilia, mycostatin was given. Subsequent cultures were normal.

Otherwise the chest remained clear, and the edema and the distention were minimal. Antibiotics were stopped completely two months after rocking bed therapy was instituted.

After five months of rocking bed therapy the patient was discharged to his home. His diet, anti-convulsant drugs (phenobarbital and dilantin), and rocking regimen remained the same.

After fifteen months at home the patient has suffered only one pulmonary infection which occurred when both his parents had respiratory infections. This pneumonia cleared readily. He is still comatose, lies in bed almost all the time, and has weak cough and gag reflexes. He continues to be the ideal candidate for hypostatic and aspiration pneumonia.

COMMENT

While rocking, the patient's color remained excellent and he synchronized his respirations with the bed. Unfortunately, we were unable to deter-

mine his tidal volumes. To insure a good to and fro movement without substantially altering his respirations, the rocking bed was set so that the patient's head reached 5° above the horizontal at its lowest point and 30° above the horizontal at its highest point. The bed rocked eleven times a minute. After each rocking period the head of the bed was gatched down and the bed tipped back, so that the patient's head was about 15° below the horizontal, for thirty minutes.

Many hospitals have rocking beds which are not in use, now that respiratory poliomyelitis has become rare. Since these same hospitals have many patients suffering from aspiration and hypostatic pneumonia, rocking bed therapy could easily be added to the usual treatment. Our experience suggests that this rocking might be a valuable adjunct to present day therapy, particularly for patients who have weak cough and gag reflexes. Further clinical trials are needed to evaluate fully the effect of the rocking bed on aspiration and hypostatic pneumonia.

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Basic Science And Practical Medicine

"He who saves one life is considered as if he had preserved the whole world." Talmud

Until recently cardiac arrest has been a matter of dread, a threat to the integrity of the individual, feared by physician and experimenter alike. The physician was frustrated by the short time available to restore the heart beat, the experimenter by the loss of the animal, and termination of an experiment.

Two types of cardiac arrest are recognized, one due to A.V. block and the other resulting from the onset of ventricular fibrillation. The different physiologic mechanisms involved required different techniques of heart resuscitation. If A.V. block occurred either as a result of overactivity of the vagus upon A.V. conduction or a disease or poison which destroyed the functional integrity of the node, then anti-cholinergic drugs or sympathomimetic amines or both are indicated. As a last resort driving the heart with an implanted electrode has been employed.

In ventricular fibrillation the methods outlined above are ineffective and unless cardiac arrest followed by cardiac massage is immediately instituted the individual is doomed since neither the brain nor the heart can endure anoxia for many minutes.

In the present era of cardiac surgery with the chest open and the heart exposed, ventricular fibrillation does not offer such a grave threat to life and measures to arrest the fibrillation and restore the heart beat often succeed. As far back as 1929 Hooker¹ was able to stop a heart when its beat was disorganized by ventricular fibrillation by inhibiting it through perfusion with an excess of potassium. He recommended a solution of calcium chloride as an antidote to the potassium when restarting the heart. We have learned since that the heart will restart spontaneously as soon as the excess potassium is washed away by blood or oxygenated Locke's solution² perfused through the coronaries.

At present the goal of cardiac surgeons is more than overcoming the ventricular fibrillation which occurs as a complication of surgery. It is also a quiescent heart retaining its integrity while the surgeon, not forced to hurry, can correct cardiac abnormalities under direct vision. What is simpler than to arrest the heart with potassium and restart it after the operator has concluded the repair by perfusion with calcium or normal blood? The assumptions were "merely" that infusion with excess of potassium would not cause cardiac damage and therefore when the arrested heart was restarted it would be as good functionally as it was before it was arrested. We know, however, that all electrical as well as mechanical activity ceases under such conditions³ and that once restarted many of the hearts

go again into ventricular fibrillation.⁴ While it is true that if only one mg. per m.l. is used in the perfusion this probably will not happen,⁴ this is not always the case.

If the invasion of the heart by a surgeon requires a quiescent heart it also requires that the heart though mechanically quiescent be electrically active so that the metabolic activity of the myocardial cell is not impaired during its arrest. The ideal condition therefore is a heart, quiet, but electrically alive, receiving oxygen to maintain its viability, and capable of remaining alive for as long as is necessary to allow an unhurried surgeon to properly complete his task.

It often happens in science that basic discoveries are made before any one sees their practical utility. A striking case of the practical value of pure abstract laboratory work is to be found in the electric waves of Hertz which were referred in the first edition of Karl Pearson's "Grammar of Science" as of no practical application, but before the second edition appeared they were already used for wireless telegraphy. When Fleming observed the lysis of a bacterial colony growing near a colony of a penicillium mold he did not envision that this observation would open a Pandora box of antibiotics for many infectious diseases. Investigations of a basic science research may proceed too far for its results to find their place in practical application until other problems have been solved. Although ultimately they may do so, it occasionally happens that they are forgotten by the time the need for their practical use has arrived. With regard to cardiac arrest as a technique in heart surgery this is certainly the case, for hearts were rendered quiescent for three quarters of a century before practical cardiac surgery caught up with the need of a technique for rendering a heart quiescent but uninjured.⁵

As far back as 1905⁷ Locke & Rosenheim had already demonstrated that "in a mammalian heart without calcium the spontaneous action current (observed with the capillary electrometer) remained strong long after the mechanical beat had become minimal," Locke concluded that "Calcium is necessary for the conversion of the heart's chemical energy into the mechanical energy of its beat." In other words perfuse a heart with calcium free blood and it stops beating. Nevertheless its membrane remains intact, its electrical activity continues, it continues to metabolize dextrose, it remains alive though quiescent. Fig. 1 is a reproduction by Mines in 1913 of Locke's experiment.

Whether or not a heart rendered quiescent by perfusing it with calcium free blood will remain undamaged after restarting is unknown. The given heart seems to stop and start as many times as it is deprived of calcium and again perfused with nor-

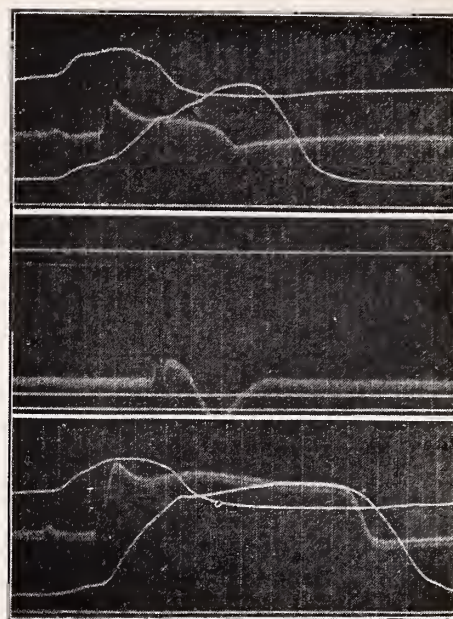


FIGURE 1

The uppermost curve in each of the three tracings is the movement of a lever connected to the auricles of the frog's heart. The middle one is the record of the string galvanometer. The lowest one, the beat of the ventricle. The upper tracing is a normal one the perfusion fluid containing calcium. The middle tracing shows the effect of omitting calcium. The electrical change persists but there is no change in the form of the muscle. The lowest tracing was obtained after adding strontium in amount equivalent to the calcium of the upper tracing. The beats return as Ringer showed but are considerably increased in duration.

mal blood. There seems to be no loss of contractile force no matter how many times the experiment is repeated on the same heart. Nevertheless studies 15, 30 or 45 minutes after quiescence are urgently needed to establish whether any damage does occur. Such observations are now being assembled by the Yale investigators Mauro and Kusserow. It is certain that successful results will usher in a new era in open heart surgery.

L.H.N.

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The Medical Tropics Come To Uncas On Thames

Physicians are, whether they realize it or not, the practitioners of regional medicine. The Connecticut and Housatonic river drainage areas furnish our patients, and the climate of our North Temperate zone shapes the epidemiology of our infectious diseases. The problems posed by the diseases we encounter repeatedly are re-illuminated by these very encounters and thus, by this process, our intellectual dexterity is continually developed. The diseases we never see are descriptions, which become progressively less and less vivid and remote from our own reality. And lo, there is produced, not by wilful choice, but semi-automatically, through the pressure of events, still another subdivision in the practice of medicine: the Connecticut specialist.

But today the Connecticut hospital clientele has changed. The change, while not enormous, is substantial enough so that for the first time certain of the Tropical Diseases may become the experience of any practitioner in the State, and for many of us have already become repeated experiences. This is due not to the occasional traveler or ex-serviceman who has lived abroad in the tropics, but to the considerable number of Puerto Ricans who have taken up residence in Connecticut.

The number is not known exactly, but estimates, considered conservative, place the present Puerto Rican population in Connecticut at about 30,000, a figure which does not include a "considerable number" of seasonal agricultural workers. Although the largest populations are in industrial centers such as Bridgeport with 8,000, Hartford 5,000, New Britain 3,500, Waterbury 2,500, New Haven 2,000, Meriden and Stamford 1,500 each and New London with about 1,000; even in small communities, *i.e.* Guilford, Milford or West Haven the numbers may run from 100 to several hundred.* The Puerto Ricans constitute approximately 1.25 per cent of the population of the state and they may represent an even more important segment of hospital admissions because of the chronic nature of some of their infections.

What new problems does this pose for us? Elsewhere in this issue are cited the common helminthic infections which are detected by fecal examinations. Bancroftian filariasis is also endemic in Puerto Rico and requires different methods of diagnosis. All constitute problems principally because the infections are chronic and survive transplantation into our own environment.

This is particularly true of Schistosomiasis, which is probably the most important of the group, for adult schistosomes survive in man more than a

quarter of a century. As the patient will probably be seen in the chronic phase of infection, after much tissue damage has already been done, prompt treatment may be an all-important point in the welfare and, indeed, the prognosis for life for the patient.

How frequent will these schistosoma cases be? This is difficult to answer with precision, for infection rates in different areas of Puerto Rico vary from zero to 37 per cent. The overall incidence has been given as between 10 to 15 per cent, but this is probably lower than the true rate because of the diagnostic methods employed. What can be said with some definiteness is that any Puerto Rican who consults for illness should be considered as a possible schistosomiasis case, even if the patient left the island as a young child. The symptoms of schistosomiasis are well known, but, as always, the difficult first step is to think of the etiological diagnosis, and here we have the important clue of geographical origin to help us. With this aid it should not be too difficult to attribute the cases of cirrhosis, of pneumonitis, of cardio-vascular disease etc. to their true origin, and to take appropriate action.

Fortunately, it is improbable that schistosomiasis and the majority of the other exotic importations will become permanently established here. The slight increase in such infections as pinworm, which we already have, is no cause for concern. It now becomes a matter of our own interest to see that research is intensified on such unsolved problems as improved therapy for schistosomiasis. This will be done presumably by intensification of the support for Tropical Medicine in our Universities and Research Institutes. One method by which this may be accomplished is by some provisions of the proposed International Health Bill and it is not without its paradoxical aspect that sums earmarked for International Health may immediately benefit us at home. Truly, "cast your bread upon the waters" etc.

D.W.

Can Rest Be Overdone?

When doctors advise rest they usually mean rest in bed, rest in an easy chair, or temporary relief from customary work which may vary from minutes to months. The writer frequently reminded medical students that rest was one of our most powerful therapeutic agents, and it is obvious that rest in bed is absolutely indicated in a good many serious diseases.

It is equally clear that after childbirth, surgical operations and some infections most physicians in the past overestimated its necessary or desirable duration. It has long been known that among

* We are indebted to Mr. Daniel Donchian, Director, New Haven Human Relations Council, for these figures.

* Jour. Amer. Med. Assn., 1954, 156, 270.

primeval peoples the females often had little or no rest after childbirth and, as a medical student over 60 years ago, the writer knew of patients who resumed their usual household routines a few hours after the termination of labor.

Professor Arnott of Birmingham, England discussed the abuse of rest before the Royal Society of Medicine.* He claimed that therapeutic rest was prescribed too often and unwisely by unthinking physicians. He compared overdosing with rest to drug addiction and emphasized the fact that mobility was normal and that even acute illnesses did not necessarily indicate that patients should spend all their time in bed.

He pointed out that immobilization produces definite changes in metabolism. The nitrogen and calcium balance is disturbed and increased calcium excretion with rise in the urinary hydrogen ion concentration favored the production of urinary calculi. Other effects are: a decline in the blood volume, impaired muscle tonus, venous stasis, and an increased tendency to thrombosis. Prolonged rest in the elderly leads to skeletal wasting, joint malposition, stretching of ligaments, anorexia, constipation and urinary incontinence.

As Justice Jackson once said, "progress generally begins in skepticism about accepted truths." Professions, like individuals, are apt to get into ruts and it is stimulating to be prodded occasionally by the opinions of men who express themselves so clearly and forcibly that they cause us to reconsider viewpoints that may be static.

G.B.

Dr. Stanley H. Osborn

Ends Long Career As Health Commissioner

The recent announcement that Stanley H. Osborn, Hartford, has concluded nearly 40 years of outstanding service as State Commissioner of Health will be received with deep regret by his fellow members in the Connecticut State Medical Society.

For almost four decades, the people of our State and their physicians have looked to Doctor Osborn for leadership in the field of public health and he has never let them down. Always alert to the latest scientific and legislative developments which affected the physical and mental welfare of residents of the state, he has made many contributions to his chosen work which have gained him local, national and even international recognition.

Meaning no slight to his successor, it can truly be said that the people of Connecticut owe Stanley Osborn a tremendous debt for the excellence of his administration as Health Commissioner, and that phy-

sicians will sorely miss his valuable advice and assistance in public health matters. Let us hope, however, that he may see fit to aid the Society in the future as he has in the past.

W.R.R.

New Blood Factor Naming System Outlined

The "chaos" of many names for the same blood clotting factor is being overcome through the cooperative efforts of leading blood experts from 16 countries.

A common problem in science is a confusion of terms—one thing may have as many as a dozen different names. This makes it difficult for scientists to communicate.

The area of blood clotting factors has been especially confused, but the International Committee on Nomenclature of Blood Clotting Factors, headed by Dr. Irving S. Wright, New York, has begun to straighten out the difficulties. Its members are the very men who discovered most of the factors being systemized.

A Roman numerical system was chosen for identification because it can be readily understood by all persons, the committee said in a report in the current *Journal of the American Medical Association*.

Even before the committee began its work in 1954, Roman numerals were used to identify at least four factors that play a role in the clotting of blood. These are factor I or fibrinogen; factor II or prothrombin; factor III or thromboplastin, and factor IV, calcium.

In the report, the committee lists four more factors—V, VII, VIII, and IX (cq. no VI). It will later publish extensive reports outlining the criteria on which it based its recommendation that these factors be recognized and assigned international symbols.

Factors V and VII each have 11 other names and play roles in various types of hemorrhagic diseases. A deficiency of factor VIII produces classic hemophilia, in which the blood does not coagulate. Factor IX deficiency produces Christmas disease, which resembles classic hemophilia.

A number of additional plasma and serum factors have been described by various workers who believe the factors play a role in clotting of the blood. They are now under study by the committee, and if the evidence indicates that the claims are valid, they will be assigned a Roman numeral.

The committee urged all educators, editors, and authors to adopt the new system in their day-to-day efforts.

THE PRESIDENT'S PAGE

THERE was a time when the physician was revered by the vast majority of people in his community. He not only salvaged their diseased bodies and mended their broken bones, but he was also the father-confessor, who, as it were, restored their souls. There still remain among us, physicians who can hearken back to the time when our word was held in high esteem. Family problems, with all the intricate marital, financial, health and sociological implications, were often satisfactorily resolved in the doctor's consulting room or at the bedside. The patient was redeemed and restored to his place in the community. This reward, in satisfaction to the physician, was a part of his bread of life, and any little additional monetary recompense for his rendering of purely medical services provided modest economic security for him in that day.

Because of the changes in population distribution where large masses of people are herded into great metropolitan centers, the rapid transportation systems of today, and the modern methods of communication, it was only natural to expect that these exogenous factors alone would bring about changes in medical practice. When there are added to these the almost breath-taking advances indigenous to the practice of medicine itself—such as the antibiotics, steroid hormones, radio-active isotopes, new and improved diagnostic techniques and the phenomenally intricate mechanisms which make possible heart, lung and brain surgery heretofore unheard of—we can well imagine the thunderous impact which these have had upon the profession and upon the public. Along with all this, or possibly in spite of it, has come about a change in the concept of the social and economic sciences whereby the physician comes in for his share of criticism.

At the present moment, in this great land of ours, certain sinister forces are ranging the countryside in an effort to force upon the people a philosophy in regard to health care which is entirely foreign to our shores. In an effort on the part of the profession to stem the tide toward this socialistic maneuver, much emphasis has been placed upon voluntary prepaid health care plans whether they be private, commercial or medical society sponsored (Blue Shield).

In working cooperatively to keep the cost of Blue Shield plans at a minimum, while being under constant pressure to increase that segment of the population covered by the service benefit principle, we are frequently concerned lest unreasonable encroachment on our personal and professional freedom bring about exactly that which we are attempting to avoid. In this area we should, therefore, not be labelled as reactionary or inconsistent with modern social thinking.

This Society has gone on record as endorsing and supporting the principles of prepayment for physicians' services. Now that our controversy with CMS has been resolved, it is the earnest desire of many that the harmony thus far achieved be not wrecked upon the rocks of some inadvertent action, which, to say the least, would be most regrettable. Many doctors still recognize that there is room for improved professional and public relations on the part of CMS, and an urgent need on the part of *all* the members of our Society for a searching and unremitting interest in the medical practices and policies of Blue Shield. The continued efforts on the part of your Society, authorized by your House of Delegates, should eventually lead to a balanced program of prepaid health care based upon careful analysis, good faith, justice and constructive thinking.

CLINICAL MEDICINE

Medical Grand Rounds, New Haven Hospital October 4, 1958

The previous case reported in the February issue of this Journal and the following case was prepared and directed by Dr. Jay Goodkind, Resident and Instructor in Medicine, Yale University School of Medicine.

Dr. Goodkind:

The second case will be presented by Dr. Aron.

Dr. Aron:

A. P. was a 20 year old white, single college freshman, admitted to this hospital for the first time one week ago because of fever and syncope occurring an hour prior to admission. The patient was in excellent health all of his life until the present illness. Without antecedent upper respiratory infection, he developed a shaking chill accompanied by malaise at noon on the day of admission. He summoned a local physician who diagnosed a viral infection; physical examination was negative except for a body temperature of 101.5° F. The patient remained in bed for the next nine hours and complained of generalized myalgia and arthralgia of the knee joints. On arising from bed on the evening of admission, he collapsed suddenly and was brought to the Emergency Room.

On physical examination he was found to have a temperature of 105.2° F. He had a tachycardia of 105 beats per minute and a respiratory rate of 44 per minute. The blood pressure was 104/75 mm. of mercury. He appeared acutely ill and restless, but was oriented in all spheres. His skin showed petechiae and discrete and confluent purpuric lesions over the thorax and abdomen, and to a lesser extent over the face and extremities. There were subconjunctival hemorrhages bilaterally and petechial lesions of the buccal mucosa. Generalized non-tender shotty lymphadenopathy was present. Examination of the heart and lungs was unremarkable except for a sinus tachycardia. The abdomen was non-tender, the liver percussed two fingerbreadths below the right costal margin and the spleen was enlarged two fingerbreadths to palpation. Bowel sounds were decreased. There were no signs of meningeal irritation and the neurological examination was negative, except for progressively increasing coma. There was marked cyanosis of the nailbeds and extreme peripheral vasoconstriction.

The admission hematocrit was 38 per cent, erythrocyte sedimentation rate 12 mm. per hour (Win-

trobe method), white blood cell count 5,800 per cu.mm., with 32 per cent polymorphonuclears, 42 per cent lymphocytes and 26 per cent monocytes. On the second hospital day the patient's white blood cell count rose to 23,400 with 56 per cent polymorphonuclears, 30 per cent band forms, nine per cent lymphocytes, and five per cent monocytes. Admission urinalysis revealed a specific gravity of 1.012 with 2+ proteinuria and negative microscopic examination. Stool guaiac was negative for occult blood. Serum non-protein nitrogen was 62 mg.% and the prothrombin time 35 per cent by the Quick method. Cultures of the nose, throat, and stool grew out normal flora. Findings from lumbar puncture on admission were entirely normal. Cerebrospinal fluid and urine cultures were negative. Six blood cultures grew out *Neisseria meningitidis*. A smear of the peripheral blood on admission showed diplococci in the cytoplasm of many polymorphonuclear leukocytes.

The initial differential diagnosis included acute meningococemia and acute leukemia. On admission to the ward the patient was immediately begun on a regimen of intravenous medications consisting of 10 million units of penicillin, 2 gm. of chloromycetin and 500 mg. of hydrocortisone daily. Shortly after admission the patient's blood pressure was noted to fall from its original level to a level of 70/0; therefore, an infusion of Levophed was begun and continued during the patient's entire hospital course. For the next 52 hours the patient's temperature varied between 101 and 105° F. Approximately three hours after admission he became acutely dyspneic and developed frank pulmonary edema, necessitating intravenous digitalization and constant positive pressure breathing. The patient remained in a semi-comatose state thereafter, responding in a disoriented manner to all questions and stimuli. Fifty-two hours after admission he became more obtunded and expired. He is presented as a case of fulminant acute meningococemia.

Dr. Atkins:

We may take a considerable degree of local pride in the disease under consideration today, since the first generally recognized description of the so-called Waterhouse-Friderichsen syndrome was made by a physician residing in Goshen, Conn. in 1811. The description of this entity from an epidemic in Medfield, Mass. in 1806 is so refreshingly vivid and accurate that I shall take the liberty of quoting a few passages from Elisha North's *Treatise on a Malignant Epidemic commonly called Spotted Fever*.

"The symptoms of the first species (e.g. the more severe form—ed.) of the fever . . . are the following: A great, surprising, and sudden loss of strength, is a constant and prominent symptom; a cold surface also presents itself, sometimes accompanied with chills, sometimes not. The extremities, in the cold stage, appear of a purplish or livid colour. Violent pain of the head, and many times of the limbs, is among the first symptoms; sometimes one, at other times the other is first attacked. When the pain commences in the limbs, it soon mounts up to the head. Distress about the precordia, violent and extreme, also universal agony of the whole system, and numbness of the extremities, are often added to the above list of symptoms. The breathing is often laborious, and attended with frequent sighing. Syncope sometimes occurs. The pulse in this, and in all the varieties and stages of this complaint, is soft, weak, and never hard, although sometimes as slow, and even slower than in health; it is often intermitting, fluttering, or totally absent, even in cases in which the patient has afterwards recovered. . . . There is loss of appetite, and sickness at stomach, and vomiting. The worst form this disease ever assumes, particularly in children, is that of coma, or cholera morbus. It frequently assumes the form of a violent mania at the time, or within a few hours of the attack, particularly in sanguine young men. Sometimes delirium is among the first symptoms; sometimes coma; and many times petechia. This symptom does not occur so often as the name which this disease has obtained would lead one to expect: these vary in size, and in colour, from a bright red to a dark purple.

"Unless the patient recovers, he commonly dies within the first 12, 24, or 48 hours. Death is ushered in by the gradual giving up of the powers of life, by syncope, by the febrile apoplexy, or by convulsions. In those who recover, the disorder puts on, either before or soon after the expiration of the first 48 hours, the form of the second variety of this disease; or, to express myself in the words of others, 'runs into the form of a mild typhus of uncertain duration.' "

The striking features of this syndrome, as they have been classically described in North's treatise are well illustrated by the patient today. There are few, if any, infectious diseases in which a patient may go from good health to death in such a short time, frequently only a matter of a few hours. The onset is usually dramatic as in this case with vomiting, severe headache and syncope which progress rapidly to delirium or stupor accompanied by chills and high remittent fever. Frequently there are signs and symptoms of severe cardiovascular involvement with persistent tachycardia, dyspnea, shock and pulmonary edema. Equally impressive is the profound

peripheral vasoconstriction, cool damp skin and severe cyanosis of lips and nail beds. The petechial rash which soon develops into coalescent areas of purpura over the face and trunk is nearly diagnostic and a very grave prognostic sign.

All of these varied features of profound toxemia are related to liberation of enormous amounts of bacterial endotoxin by the circulating meningococci with consequent extensive damage to the cardiovascular system. The rarity of this fulminating complication (in the neighborhood of one per cent of patients with meningococcal infection) suggests that an element of hypersensitivity may play a role although this has not been established with certainty. Organisms are present in the petechiae and may be demonstrated in approximately two-thirds of the cases by either smear or culture, a point worth emphasizing as rapid diagnosis and treatment are of course imperative.

Results of even the most modern treatment are frequently disappointing despite the use of massive antibiotic therapy with penicillin and sulphadiazine coupled with intravenous hydrocortisone and measures to combat shock and pulmonary edema. Though the infection *per se* is undoubtedly rapidly brought under control by such measures, there is no specific treatment for the endotoxin already liberated and presumably "fixed" to the tissues throughout the body. Contrary to earlier concepts, actual adrenal insufficiency occurs in only a minority of cases although some degree of adrenal hemorrhage is present in virtually all. Fortunately, the Waterhouse-Friderichsen syndrome is rare, since nearly half of the deaths attributable to meningococcal infections are due to this complication. Yet one patient in six dying of this disease presents at postmortem with more than moderate signs of meningitis, another indication that it is not extensive involvement of the CNS *per se* that generally leads to death. By the same token, the presence, as in this case, of a negative L.P. either early or later in the course of the disease in no way militates against the diagnosis.

A feature which was misleading in this patient was the low normal leukocyte count with a reported preponderance of mononuclear forms leading to the early suspected diagnosis of an acute hematological disorder. In general, a pronounced leukocytosis is present in the Waterhouse-Friderichsen syndrome but as with any bacteremia, the actual destruction or margination of circulating cells which become adherent to capillary walls may result in counts which are below normal. The presence of numbers of cocci demonstrated later within the cytoplasm of degenerating polymorphonuclear leukocytes actually provided the correct diagnosis. The marked shift to the left with many immature myeloid cells

on repeat examination of the blood smear accounted for the so-called "mononuclear" forms.

Differential diagnosis, particularly before development of the full-blown picture, may be quite difficult. Useful leads are the dramatic swiftness of onset and development of prostration frequently in a young, previously healthy patient; also lack of significant epidemiological evidence incriminating the rickettsial diseases with associated rashes (which develop only two to four days after the onset of fever). A preceding history of sore throat is present in perhaps half of the patients but may be so mild as to be overlooked. In cases where the diagnosis cannot be immediately established by demonstration of organisms on smear of petechiae or spinal fluid, it is essential to institute vigorous treatment immediately on presumptive diagnosis. The dreaded complications of coexistent shock and pulmonary edema must be watched for and averted insofar as possible by avoidance of overzealous hydration. Shock, azotemia and anuria make proper replacement of fluid and electrolytes difficult to control or gauge accurately as in this case.

Finally, a word about epidemiology. "Cerebrospinal fever" has been known as an epidemic disease with peaks of incidence in winter and spring since the early 19th century. In contrast to other highly contagious diseases such as plague or the common childhood infections, cases of meningococcal meningitis appear in a random fashion but rise in number when the carrier rate reaches a certain threshold (about 20 to 30 per cent). In some epidemics the carrier rate may reach nearly 90 per cent. Analysis of organisms by type indicates direct respiratory transmission as the means of spread. The relative rarity and irregular distribution of clinical cases, however, strongly suggest that as yet undefined host factors play a definitive role. Treatment of contacts with a course of oral sulphadiazine is one of the few clearly indicated cases for chemotherapeutic prophylaxis and should be undertaken whether or not individual cultures of the nasopharynx are available.

Dr. Bondy:

Dr. Finch what is the explanation of the lowered prothrombin time?

Dr. Finch:

The explanation for the reduced prothrombin activity in this patient has puzzled me, and I am not sure that I have an adequate explanation for it at the present time. It should be emphasized that other clotting studies which included a bleeding time, clotting time, clot retraction and fibrinolysin determination all were within normal limits. One possibility that should seriously be considered is the

consumption of prothrombin due to the release of tissue thromboplastin secondary to endotoxin destruction of vascular epithelium, parenchymal tissue and formed elements of the blood. The platelets were moderately reduced by smear, but their concentration was adequate to produce normal clot retraction. A second contributing factor might be that of diminished prothrombin production due to endotoxin or norepinephrine-induced liver necrosis. It is unlikely that this mechanism played a major role, but it is of interest that a serum transaminase determination done on serum obtained shortly after admission was within normal limits (less than 40 units), but a sample obtained 11 hours later showed moderate elevation (70 units). Lysozyme determinations done on these same samples showed an elevated value on the initial sample and a normal value on the second sample. It is suggested that the elevated transaminase value was a reflection of liver and/or cardiac damage as shock and anoxemia progressed. The elevated lysozyme value probably was a reflection of extensive leukocyte damage and destruction during the initial phases of his illness. The third possibility to account for the reduced prothrombin concentration, for which we have no direct evidence, would be that of direct prothrombin destruction by the endotoxin or by lytic enzymes released from tissue. Against this hypothesis is the fact that no fibrinolysin was demonstrated, but in favor of it was the demonstration that other serum enzymes were increased in concentration. The occurrence of this defect in our patient certainly points out the necessity for further investigation."

Dr. Goodkind:

Dr. Atkins will open the discussion.

Dr. Atkins:

Dr. Klatskin what is the relation of levophed to liver necrosis?

Dr. Klatskin:

A recent report confirmed by our own observations indicates that prolonged therapy with pressor amines such as levophed may produce massive hepatic necrosis. In the cases we have observed this has been accompanied by inordinately high levels of serum glutamic in oxalacetic transaminase.

Dr. Atkins:

Could tissue damage be caused by shock due to endotoxins?

Dr. Klatskin:

Although all degrees of shock may affect the liver to some extent, it takes a 24 hour period of sustained hypotension to inflict sufficient damage to produce jaundice.

Dr. Atkins:

Dr. Epstein what is your view about the use of whole blood to combat the shock instead of levophed?

Dr. Epstein:

In many instances of medical shock caused by overwhelming infection it is of course easier to use levophed. However blood when available will definitely reduce the need for a pressor amine.

Dr. Goodkind:

Dr. Bondy what about the dosages of hydrocortisone that should be used in cases of Waterhouse-Friderichsen syndrome.

Dr. Bondy:

Although historically, the Waterhouse-Friderichsen syndrome was considered to be due to hemorrhage in the adrenal gland with consequent adrenal insufficiency, it is now believed that the cause of the shock in this syndrome is the appearance of large amounts of endotoxin in the blood of patients with overwhelming meningococcal infection. Under these circumstances, it seems unlikely that the administration of hydracortisone serves any physiological function as a replacement for a missing steroid secretion. Instead, it must be considered as a pharmacological preparation used to support the circulation and decrease the inflammatory reaction and for this reason, very large doses are usually needed. The material to be used should be one with a high anti-inflammatory potency and therefore, hydracortisone or prednisone or prednisolone would be the drugs of choice although some of the newly developed steroids such as triamcinolone may also prove useful in the future. Since the patient is in shock, subcutaneous or intra-muscular injection is not suitable and the material must be available for intravenous use. The most readily available preparation answering this description is at the present time, hydracortisone hemi succinate, which is marketed under the trade name of Solucortef and this is what was used in the present patient. If the danger of electrolyte retention had been considered of primary importance, it would have been possible to use prednisolone phosphate which is also highly soluble and of which a small amount is available for experimental purposes. However, it is not my feeling that the electrolyte problem in patients of this sort derives from the large doses of steroid which is given, but rather that the failing kidney and the presence of shock are responsible for the difficulty in maintaining normal sodium diuresis.

The dose to be given is somewhat arbitrary and since the danger of overdosing the patient seems to be of little importance in the acute disease, we have not hesitated to use very large doses. In the present

patient, 500 mg. per day was suggested, but it is possible that others might recommend even larger doses.

The question of whether the use of steroids in this situation is really valuable is open to some debate. Experimental data purporting to show prolonged survival after the administration of corticosteroids to animals with endotoxin shock have given variable and unpredictable results. The data in the humans are even more difficult to evaluate. It does seem, however, on clinical ground, that some patients with this type of shock improve dramatically when steroids are given and on this basis it is the feeling of many clinicians that the material is useful.

Dr. Goodkind:

Dr. Aaron Lerner (Section of Dermatology) suggested that we use intravenous adrenocorticotrophic hormone (ACTH) in treating this patient, since he did not appear to be responding to hydrocortisone. He suggested this therapy because of the evidence in the literature that ACTH may have a direct effect on peripheral tissues beyond its effects via the adrenal cortex. By this effect it might be possible to counteract the severe peripheral vascular collapse this patient presented. Unfortunately the patient did not survive long enough to establish a therapeutic response to ACTH.

Are there any other questions? If not I would like to thank all the participants.

Nomenclature For Therapeutic Diets

DORIS JOHNSON, PH.D.*

The trend in modern diet therapy is to consider diets used in the treatment of disease as modifications of the normal diet in one or more nutrients. If all physicians would use this principle in describing the diets which they prescribe it would be very helpful, especially to the hospital dietitian, and would make it considerably easier for a patient to receive the same dietary considerations no matter where he may be.

The use of the names of diseases to describe the diet to be used is not very helpful as far as telling the principle of the diet. For example, what is a gall-bladder diet, or an ulcer diet, or a vomiting diet, or a terminal diet? Physicians have prescribed all of these, as well as many others, some having even less meaning than these cited. Furthermore, if a patient does not have the disease in question but has a diet prescribed for him which has the name of a disease in it, he can become most upset. For ex-

* Director, Department of Dietetics, Grace-New Haven Community Hospital.

This article prepared at the request of and approved by the Subcommittee on Nutrition of the Committee on Public Health of the Connecticut State Medical Society.

ample, a patient with a simple gastro-intestinal disturbance should not be given an Ulcer Diet. He will surely develop an ulcer just worrying about whether or not he does have one.

The use of the names of doctors to describe a diet is also not very helpful as far as describing the principle of the diet. Dr. X's diet is known only to Dr. X. Usually such diets are unnecessarily restrictive to the patient and do not allow for the selection of foods possible if the diet were described in principle and not by the doctor's name.

The most logical way to describe a therapeutic diet then is in terms of modification of the nutrients necessary in order to accomplish a certain therapeutic principle. This same principle may apply to the treatment of more than one disease, as for example a high-protein diet may be used for the treatment of burns, nephrosis, protein malnutrition, and other diseases, as well as post-operatively.

The normal diet may be modified in a number of ways and various combinations of these are also possible. Thus, the simplest modification is that of the selection of food. This is the type of diet that would be used by persons with food allergies. Those foods causing the allergic response are not to be selected. Depending upon the food causing the allergic response such a diet may be very simple, or if the food is one such as milk, the diet may be quite difficult to keep nutritionally adequate and palatable.

The normal diet may be modified in consistency. Thus we have the various liquid diets, the restricted-fiber diet and/or the bland diet. Such diets are used in the treatment of various diseases of the gastro-intestinal tract.

The normal diet may be modified in calories; high-caloric diets for increasing weight and low-calorie diets for reduction of weight.

The normal diet may be modified in protein, fat, or carbohydrate content, or any combination of these. These nutrients may be decreased or increased from the normal, depending upon what is the therapeutic objective.

The normal diet also may be modified in sodium content for the treatment of a variety of diseases concerned with fluid retention.

Generally speaking these are the main modifications of the normal diet necessary for the treatment of most diseases that are amenable to modification in diet. The use of such diets as high-vitamin or high-iron is quite obsolete inasmuch as when therapeutic amounts of vitamins or iron are needed it is more effective to give any of these nutrients as a medication. It is most difficult, if not impossible in the majority of cases, to get people to eat enough foods to secure therapeutic amounts of these nutrients from natural sources.

One further point to be emphasized is that the degree of modification of the normal diet should be specified. Thus, if a diet is to be restricted in calories the exact caloric level should be specified, i.e., 1,200, 1,500, etc., or if restricted in sodium the exact milligram level desired, as 500 mg. sodium diet. It is not necessary to have an infinite number of levels of restriction or addition of a nutrient. This only adds confusion and work. For example, four levels of sodium restriction have been accepted by the American Heart Association as adequate to treat any of the diseases for which such a restriction is indicated. If doctors would conform to these four accepted levels it would aid the hospital dietitians and nutritionists immeasurably. There is no significant difference between a 1,100 mg. and a 1,200 mg. sodium diet, for example.

It should be borne in mind that the composition of foods is such that the content of a specific food varies from sample to sample depending upon such factors as the age of the food, where it was grown, how it was stored, its variety, as well as others. Thus the accuracy implied by having a large variety of levels of restriction of a nutrient is not warranted. Exact quantitative intakes can only be secured in the metabolism unit where measurement of foods by torsion balance is possible. This is a time consuming procedure and usually confined to clinical research.

Diet manuals are a must in order for the hospital team of doctor, dietitian, and nurse to function in the dietary care of patients. Diet manuals should be so written as to embody the principle just described that therapeutic diets are modification of the normal diet.

As a detailed guide to the usual modifications of the normal diet and the principles involved in the treatment of diseases there is available "The Handbook of Diet Therapy" prepared for the American Dietetic Association by Dorothea Turner. A recent revised edition is available from the American Dietetic Association, 620 North Michigan Avenue, Chicago 11, Illinois or from the University of Chicago Press. This book would be a most valuable addition to every physician's library. If this book were also used as the basis for the planning of hospital diet manuals a mutual understanding would develop between physician and dietitian as to the therapeutic procedure to be followed in the dietary care of patients.

The standardization and simplification of therapeutic diets is not to be construed to mean that the patient will be given a stereotyped diet without individualization. Indeed the reverse is true, for if a diet is planned on general principles rather than specifically listed foods, the selection of foods for

the patient is much greater which allows him to fit his therapeutic diet into his particular situation. This may be influenced by his social customs, his religious beliefs, and his economic status. If a diet is to be followed by a patient it must be realistic in terms of his needs personally as well as medically.

DuBois some years ago said we needed fewer but better therapeutic diets. When therapeutic diets are planned as modifications of the normal diet, based on scientific principles, simplification and standardization occurs, with increased satisfaction on the part of the patients.

Societies Share Director's Services

The Bridgeport Chapter of the Connecticut Society for Crippled Children and Adults has arranged for the services of Mr. Edmond McLaughlin as its new Executive Director. Mr. McLaughlin will serve on a part-time basis, since he also serves the Cerebral Palsy Association in a similar capacity.

The new executive director plans to integrate the services offered at the Workshop and Physical Therapy Center on Park Avenue to a greater extent than has been done formerly.

Community Is Called Responsible For Problems Of Staph Infections

Staphylococcal infection is not only a medical problem but a responsibility of the entire community, according to a report given here at a sectional meeting of the American College of Surgeons by Dr. Lyndon E. Lee, Jr., Washington, D. C., Coordinator, Research in Surgery, U.S. Veterans Administration.

Results of an 18-month study by the VA Cooperative Study Committee for Hospital Infections showed that the antibiotic resistance of staphylococcus found in infections acquired outside of hospitals is almost as high as that in hospitals.

"Approximately half of the infected patients studied entered a hospital with the infection already present," Dr. Lee said. He pointed up the findings by posing the question of "how swiftly the reservoir of resistant organisms is building up in the nonhospital community."

The study noted little difference—a range of from 10 to 13 per cent—in staphylococcal infections found in either strictly medical or surgical services in the hospitals surveyed. Dr. Lee warned that both groups must be considered of equal importance in hospital staff considerations of the problem in infections and that each may serve as a source of environmental contamination and infection.

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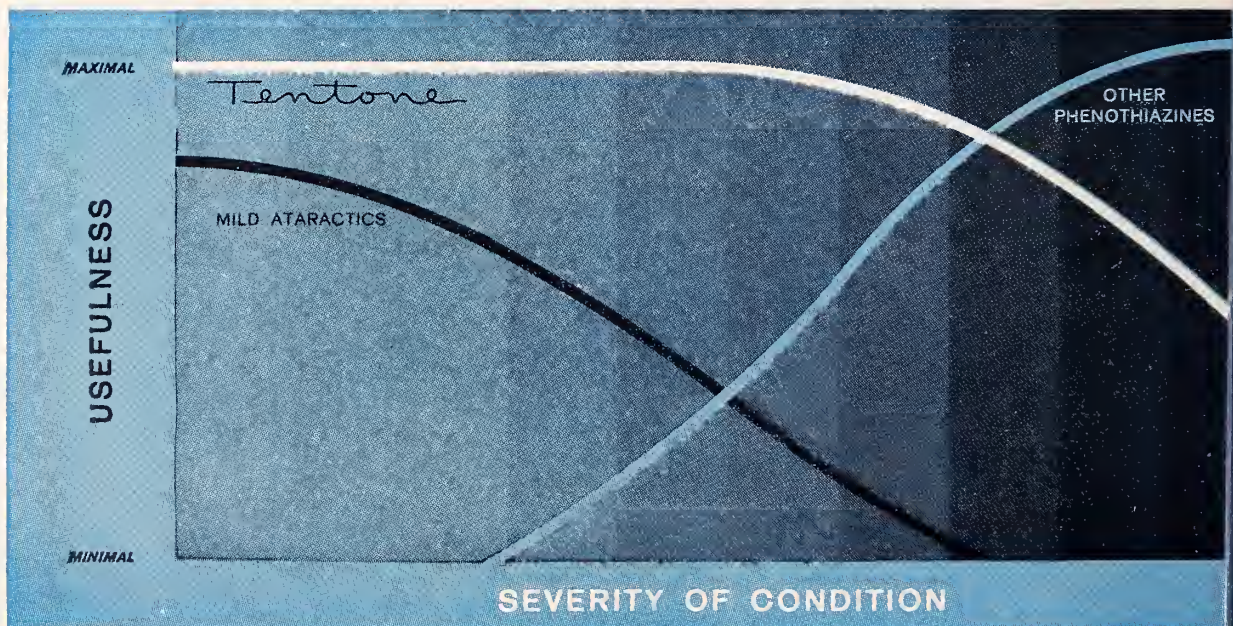
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Assistant to Executive Secretary

COUNCIL MEETING

Wednesday, April 22, 1959

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 2:30 P.M. on Wednesday, April 22, 1959. Present in addition to the Chairman were Doctors Russell, Weise, Polito, Richards, O'Connor, Gallivan, Cullen, Scully, Davis, Buckley, Blodinger, Archambault, Eddy, Pollock, Grendon, Rentsch and Gilman. Absent were Doctors Carter, Gens, Cornwell, Kennedy, Schiavetti, Ottenheimer, Gardner, Starr and Hughes.

ACCEPTANCE OF MINUTES. The written minutes of the March 18, 1959 meeting were accepted without correction.

Henry M. Pollock, Jr., newly elected Alternate Councilor from Hartford County was introduced to the Council.

Nicholas T. Phillips, newly elected Alternate Councilor from New London County who will be seated at the next meeting of the Council, following the annual meeting of the House of Delegates, was introduced as a guest.

CMS. Approximately one-half of the entire meeting was devoted to various aspects of the relationship of the Society to CMS, Inc. Some of the more important matters touched upon were as follows:

A) The Secretary reported that, on inquiry, the CMS office had confirmed the fact that copies of the CMS By-laws, as amended at the annual meeting of the Board on February 17, 1959, would soon be mailed out to all participating physicians.

B) (1) The Secretary reported generally favorable reaction to the special mailing of March 20, 1959 which was designed to prevent misunderstanding among the membership relative to the "Special Individual Contract" and that its intended purpose had apparently been served.

(2) There was general agreement of the Council that the CMS advertising campaign which is promoting the "Special Individual Contract," somehow fails to convey that this contract is, in fact, meant to meet the needs of the aging and once more fails to tie in the contribution of physicians to the plan. Dr. Archambault explained that for administrative reasons, it could not be advertised as *only* for those 65 years old and older. Dr. Blodinger reported that he

hopes future CMS publicity will give more credit to physicians who, after all, are really making the CMS program possible.

(3) There was considerable discussion as to how the House of Delegates, in passing a resolution on "Care of the Aging," could also take additional action, the text of which would be quotable in CMS advertising.

It was VOTED to develop a suitable resolution to publicly commend CMS for its efforts to implement and support the Society's attitude toward "Care of the Aging" and ask the House of Delegates to approve such an associated resolution.

C) A prepared text relative to the development of more positive medical policies in relation to third party agencies had been prepared by the Secretary. The Council VOTED unanimously to transmit this text to the House of Delegates on April 28, 1959 and to recommend the adoption of a motion based on the text. The motion concludes:

"MOVED: That the Council shall, without delay, proceed to implement the foregoing principles by conducting an opinion survey among the members of the Connecticut State Medical Society for the purpose of establishing positive medical policies designed to aid all Third Party agencies in the development of fair and equitable plans which will provide prepayment for physicians' services."

In the event that the House of Delegates adopts this recommended motion, it was VOTED to publish the supporting material in "Connecticut Medicine" and send copies to the CMS Board, the Medical Advisory Board and National Blue Shield Medical Care Plans.

D) Two documents were submitted for consideration which pertained to the methods of receiving and acting on a proposed new CMS contract or a proposed major change in an existing CMS contract.

The first of these is entitled "Suggested method by which the Board of Directors of Connecticut Medical Service may obtain consideration of a proposed new Contract, or of proposed changes in an existing contract, by the Connecticut State Medical Society," and reads as follows:

"I. When the Board of Directors of CMS, Inc. desires to propose a new contract or change an existing contract, the Board shall submit same, in com-

plete detail and in final form, to the Council of the Connecticut State Medical Society either directly or through the medium of the Council representatives on the Joint Liaison Committee of CMS-CSMS.

"II. As soon as practicable thereafter, the Executive Secretary of the Connecticut State Medical Society shall inform the Board of Directors of CMS, Inc. of the action taken by the House of Delegates of the Connecticut State Medical Society with respect to any proposed new contract or proposed changes in any existing contract as specified in Paragraph I."

It was VOTED unanimously to transmit this suggestion to the Board of Directors of CMS for consideration and action.

The second document is entitled "Suggested method by which the Connecticut State Medical Society may expeditiously act upon a request by the Board of Directors of CMS, Inc. for approval of a proposed new contract or of proposed changes in an existing contract."

It was VOTED unanimously to adopt this proposed method and transmit it to the House of Delegates on April 29, 1959 with a recommendation that it be adopted by the House. (See House of Delegates actions.)

E) A motion picture was viewed by the Council entitled, "The Story of CMS." The Council was asked by the CMS Board to advise the Board as to what groups of physicians it should be shown in the future.

After viewing the film, there was general agreement of the Council that a number of apparent inaccuracies were contained therein and a motion to recommend its showing to local and county medical organizations was defeated by a vote of 10-7.

It was VOTED to request the Board of Directors to submit a printed script of the film by which to check these apparent inaccuracies, provided the Board is desirous of obtaining the considered advice of the Council or of its liaison sub-committee in this matter.

OLD CORRESPONDENCE. A) A letter from Harold M. Clarke, New Britain, was presented, requesting the Council to initiate legislation whereby insurance companies will be obligated to honor assignment of physicians' fees by patients to physicians. It was pointed out that such legislation could not be initiated until 1961 and it was VOTED to refer this matter to the Committee on State Legislation for future consideration at an appropriate time.

B) Mr. Frank Barton, Secretary of the Council on National Defense of the AMA, requested the Council's opinion on legal implications of providing expanded medical and health services in a civil defense emergency or other disaster situation. Apparently Connecticut is one of the 40 states which

adopted a general immunity provision. However, it is uncertain whether this immunity would apply to those performing services for which a license is required. This, only state courts could determine. It was VOTED to take no action on this request.

NEW CORRESPONDENCE. A series of county association and city society actions on the "three resolutions" was presented for the information of the Council. These were as follows:

A) The Meriden Medical Society took the following actions on the three Council-approved resolutions:

1. Freedom of Choice—"went on record as endorsing free choice of physician in principle with the realization that this principle must be subject to certain qualifications."
2. Closed Panel Systems—"opposed to physicians participating in any plan which restricts free choice of physician."
3. Care of the Aging—approved.

B) The Norwalk Medical Society took action on the three Council-approved resolutions as follows:

1. Freedom of Choice—"Endorses the principle of free choice of physician by the patient."
2. Closed Panel Systems—"opposed to principle of closed panel . . . plans in that they prevent free choice of physician by the patient; not conducive to traditional physician-patient relationship . . ."
3. Care of the Aging—"pledges continued support as per Council wording of same."

C) The New London County Medical Association took favorable action on the three Council-approved resolutions without any changes.

D) The Middlesex County Medical Association reports that at its annual meeting of April 19, 1959, the three Council-approved resolutions re "Freedom of Choice," "Closed Panel Systems" and "Care of the Aging" were adopted verbatim.

The Association also amended its by-laws so that the newly-elected Councilor and Alternate Council will be seated hereafter at the first meeting of the Council following the annual meeting of the State Medical Society.

E) The Connecticut Public Health Association requested the Society for a donation to help finance the publication of its booklet, "A Guidebook for Health Careers." It was VOTED to inform the CPHA, with regret, that since the Society was financing its own program, "Health Careers," no funds were presently available with which to make such a donation.

F) The Council received as information, an announcement by Arthur Ebbert, Jr., Chairman of the Committee on Postgraduate Education, that the 34th Clinical Congress will be held in New Haven on September 30, 1959.

It was VOTED to approve the holding of a proposed "Symposium on Problems of Graduate and Postgraduate Medical Education" in October, 1959. It was further VOTED that the estimated cost of \$500-\$750 be shared to not more than one-third of the total with the Connecticut Hospital Association and the Yale University School of Medicine.

G) M. David Deren, Chairman, Committee on Medical Economics and Insurance, requested the Council to decide whether his committee should develop any or all of the plans described in his Committee Report for the State Medical Society. He further requests that each county have a representative on this committee.

It was VOTED not to ask the committee to proceed at this time with plans for the State Society relative to retirement, pension and insurance programs but to request the committee to familiarize itself with the problems being encountered by the Fairfield County Medical Association in regard to its pension and retirement plan. It was further VOTED that the Chairman of the Council appoint such additional members to the Committee on Medical Economics and Insurance as are needed to give representation to each of the eight counties.

H) Senator Hubert H. Humphrey, Chairman of Senate Sub-committee on Re-organization and International Organizations of the Committee on Governmental Operations, invited the Society to cooperate with his sub-committee which is conducting an International Health Study as follows: "Your State Medical Society could be of particular assistance to us if you could kindly advise as to the names of . . . leading physicians in your state . . . who could provide expert judgment to us in answer to this question: "What should the U.S. Government do to strengthen international collaboration toward the conquest of major killing and crippling diseases—such as cancer, cardiovascular ailments, neurological, mental disorders and the like?"

It was VOTED to transmit such opinions as may be expressed by members of the State Medical Society to the AMA through our AMA delegates, since the AMA is cooperating with world health organizations in these matters. Dr. Gallivan was asked to compose an informative reply to Senator Humphrey, conveying this message.

I) It was VOTED to ask William A. Wilson, Chairman of the Committee on Public Health, to submit still further clarification of the meaning of "Hospitals as Regional Health Centers" in the following resolution, previously submitted by J. Harold Root and previously postponed for action until Item 2 had been clarified.

"The Health Committee of the Governor's Committee on Children and Youth for the 1960 White House Conference asks the Public Health Commit-

tee of the Connecticut State Medical Society to approve its program for the improvement of the health of children and youth in Connecticut, especially as regards the following fields.

1. School Health
- *2. Hospitals as regional health centers
3. Nutrition
4. Mental Health
5. Services to physically handicapped
6. Coordination of Voluntary Health Agencies

"The Health Committee of the Governor's Committee asks the Public Health Committee to approve its program and forward this resolution to the Council of the State Medical Society for its approval, representing the Connecticut State Medical Society."

J) Resignation of member of Committee on Hospitals. It was VOTED to accept the resignation of Nathaniel Selleck, Jr., Danbury, from this committee and to appoint no replacement at this time.

K) Appointment of representative to Connecticut Health League. Sue T. Gould, having expressed a desire *not* to be reappointed to this post, it was VOTED that Dr. Gould not be reappointed but that William R. Richards, New Haven, at such later time as may be practical, replace Dr. Gould as one of the three Society's representatives to the Connecticut Health League.

REPORT OF COMMITTEE TO STUDY REVISION OF THE BY-LAWS RE COMMITTEE ON THIRD PARTY PAYMENTS. It was VOTED to refer the recommendations for changes in the by-laws re the Committee on Third Party Payments, submitted by Max Alpert, Chairman, to the Council's Sub-committee to Study and Revise By-laws, *after* the organizational meeting of the Council following the meeting of the House of Delegates on April 28, 1959.

PROGRESS REPORT OF COUNCIL SUB-COMMITTEE TO STUDY AND REVISE BY-LAWS. Dr. Gens indicated by mail that his committee had no definitive report to make at this time.

Since Harold M. Clarke, New Britain, is no longer a member of the Council and therefore no longer a member of this sub-committee, the Chairman ruled that all Council sub-committees will be reviewed at the organizational meeting of the Council in May, 1959. The ruling of the chair was challenged and was supported by unanimous vote.

APPROVAL OF \$75.00 DUES TO CONFERENCE OF PRESIDENTS. It was VOTED to authorize payment of \$75.00 annual dues to the Conference of Presidents and Other Officers of State Medical Associations.

REQUESTS FROM COMMITTEE ON PUBLIC HEALTH. It was VOTED to approve the following requests made of the Council by the Committee on Public Health.

A) Endorse a pilot research study of a selected group of automobile drivers to establish standards of physical fitness.

B) Encourage the participation of Connecticut physicians in the proposed joint project by the Connecticut State Departments of Health and Motor Vehicles.

A) JOINT CONFERENCE COMMITTEE ON STAPHYLOCOCCAL AND OTHER HOSPITAL-ACQUIRED INFECTIONS. Having voted on January 7, 1959 as follows: "that Dr. Wilson and the Committee on Public Health make further study as to the purposes and functions of such a committee and be authorized to continue discussions with representatives of the State Health Department, Hospital Association, Yale School of Medicine, etc. and report back to the Council as soon as feasible with recommendations and for further consultations.", and having received from the Chairman of the Committee on Public Health several apparently conflicting letters relative to compliance with this action of the Council, it was VOTED to request Dr. Wilson to further clarify what specific action his committee has taken in this regard and what need for, purposes of, and recommendations for the establishment of the proposed "joint conference committee" he wishes to submit to the Council "in further consultation" (as directed above).

B) MOTIONS RE POLIOMYELITIS. The following motions were submitted by the Committee on Public Health:

1. That it is advisable to continue to prohibit elective nose and throat surgery from July 1 to at least October 1, 1959 even in fully immunized individuals and that a copy of this recommendation be sent to the Connecticut Hospital Association and the Connecticut State Department of Health. 2. That there is no indication for withholding various other immunizing injections from individuals who are fully immunized against poliomyelitis. 3. The decision to administer a 4th dose of poliomyelitis vaccine is one to be made by the individual physician.

It was VOTED to ask for the consideration of these motions by the Sections on ENT and Pediatrics and the Connecticut Association of American Board Internists before their transmittal to the Connecticut Hospital Association, Connecticut State Department of Health and the county medical associations.

WELFARE PATIENTS' PRESCRIPTION BLANKS. Resolutions from the Hartford County and Middlesex County Medical Associations were studied, both of which refer to and voice strong protest against the recent directive of the State Welfare Department in reference to the issuing of prescriptions to welfare patients.

It was VOTED to receive these resolutions and transmit them for consideration and action by the House of Delegates on April 28th.

A telephone message from Dr. Harold F. Pierce, Medical Director of the State Welfare Department, relative to these protests is summarized as follows:

1. The Governors Budget was cut down more than half.
2. Previously, the department spent \$3,750 a day but from now on, they are only allowed \$2,000.
3. The problem is how are they going to get the drugs that are absolutely necessary to only the people who absolutely need them and eliminate the others who do not absolutely need the drugs.
4. The department went about it the wrong way by not going to the Advisory Committee to the Commissioners of Welfare and Finance and Control, also Dr. Pierce's reference committee.
5. But the department is ready for any suggestions from the State Medical Society and they are willing to learn. Can the Society advise them?

It was VOTED to request a written statement from Dr. Pierce for presentation to the House of Delegates in response to the above resolutions.

APPLICATION FOR SCHOLARSHIP LOAN. An application for a scholarship loan in the amount of \$500.00 was received from Boston F. Martin, an intern at Danbury Hospital, Danbury, Connecticut, approved by Dr. Victor Machcinski, Director of Intern Education at that hospital.

It was VOTED that the Executive Secretary investigate the status of such a loan fund and, if such a fund is available, to request the Chairman of the Council to appoint three members of the Council to act as a scholarship loan committee for consideration of this application.

DATE OF NEXT MEETING. It was VOTED that the next meeting of the Council, which will be the organizational meeting, be held on Thursday, May 14, 1959.

New Members

LITCHFIELD COUNTY

Richard J. Cobb, Norfolk
Joseph A. Moriarty, Torrington

NEW LONDON COUNTY

James D. Balfour, Norwich
James W. Tillinghast, Norwich

TOLLAND COUNTY

Robert J. N. Kerr, Rockville

WINDHAM COUNTY

Harvey J. Grinsell, Danielson
Pauline G. Starks, Putnam

Special Article

Intestinal Parasitism In Puerto Ricans

HAROLD W. SCHELL, M.D.
Norwich

ALTHOUGH eosinophilia occurs as a manifestation of many medical disorders, perhaps one of the best recognized is that in association with parasitic infestations. The most striking eosinophile elevation is found where there is actual tissue invasion, as in trichinosis and echinococcosis. The eosinophilia of intestinal parasitism is said to occur less regularly and is characteristically not as pronounced.¹ There are three basic life cycles of the intestinal nematodes. In the first or direct type, so classified by Mackie, et al.,² infective ova are ingested by the host and hatch in the intestines. The young worms develop to maturity without migrating from the intestine, and produce ova which are once more passed in the feces. This is the cycle of *Trichuris trichiura* and *Enterobius vermicularis*. As there is no tissue invasion, eosinophilia is rare when either of these infestations is present alone. The second is the modified direct type. The infective ova are ingested by the host, hatch, and the larvae penetrate the intestinal walls. There is then a migration of the larvae via the blood stream to the heart and alveoli of the lungs. The larvae ascend the trachea, are swallowed, and develop into maturity in the intestine. This is the characteristic cycle of *Ascaris lumbricoides*. The third or skin penetrating type is seen in the infections with *Ancylostoma duodenale*, *Necator americanus*, and with a minor variation, in *Strongyloides stercoralis*. In this cycle the ova are passed in the feces, hatch in the soil, and become filariform after molting. The filariform organisms penetrate the skin or are ingested, enter the blood stream, migrate to the heart, alveoli of the lungs, ascend the trachea, are swallowed, and develop into maturity in the intestine. In the latter two types of nematode life cycles, there is blood stream invasion in the course of infection and the greatest eosinophilia is seen during this phase. In *Schistosoma mansoni* infection, the parasites enter through the skin and lodge in the entire portal system, liver, spleen, lungs and gastrointestinal tract. Eosinophilia, as would be expected, is extremely common.

As all of the above mentioned parasites, except *Ancylostoma duodenale*, are endemic in Puerto Rico, the influx of Puerto Rican workers into Connecticut creates a potentially hazardous condition. It was noted that Puerto Ricans who were admitted to the Uncas on Thames Hospital manifested a rather monotonously regular eosinophilia. In the past five years, this group was subjected to repeated stool examinations and the results are summarized in the following report:

Between October 1, 1953 and October 1, 1958, there were twenty-one Puerto Ricans admitted to the Medical Service of the Uncas on Thames Hospital. In Chart I are summarized the average

CHART I			
CASE	AVERAGE % EOSINOPHILIA	STOOLS	IN U.S.A.
1	22	NA, TT, SS	2 months
2	6	NE	4 months
3	4	NA, TT	8 months
4	6	TT, AL	4 months
5	7	NA, TT	1 year
6	0	none found	11 years
7	11	NA, EV	5 years
8	0	NA, TT	3 years
9	9	TT	1 month
10	9	NA, TT	2 years
11	11	NA	2 years
12	6	NA, TT	6 months
13	10	NA, TT	17 months
14	19	NA, TT, SM	2 years
15	12	NA, TT, SM	7 months
16	15	NA, TT	3 years
17	1	NE	6 years
18	12	NA, TT	5 years
19	10	NA	6 years
20	1	NE	born here
21	15	NA, TT	1 year

NA *Necator americanus*
TT *Trichuris trichiura*
SS *Strongyloides stercoralis*
EV *Enterobius vermicularis*
SM *Schistosoma mansoni*
AL *Ascaris lumbricoides*
NE Not examined

*Clinical Director of Medicine and Surgery, Uncas on Thames Hospital, Norwich, Connecticut.

eosinophilia, the results of the stool examinations, and the duration of time that these Puerto Ricans had been in the United States at the time of their admission to this hospital. Of the twenty-one cases, there were two patients (Cases 17 and 20) who had an eosinophile count of one per cent. In neither of these patients were stool examinations performed. It is interesting to note that one of these patients was born in the United States and is the only case of the entire series where this is true. Case 2 had an average eosinophilia of six per cent but did not have stool examinations because he signed out of the hospital against medical advice before these studies were performed. If one then discards Cases 2, 17, and 20, because stool examinations were not done, this would leave eighteen patients, seventeen of whom had at least one intestinal parasite. It can further be seen that sixteen of the eighteen had an eosinophilia of four per cent or more. The range of eosinophilia was from four to twenty-six per cent. Case 6 had no eosinophiles and repeated stool examinations were negative for intestinal parasites. Case 8 is the only patient who did not manifest any eosinophilia in the presence of intestinal parasites.

The most common intestinal parasite was the hookworm, *Necator americanus*, which was present in fifteen patients. *Trichuris trichiura* occurred in fourteen, *Schistosoma mansoni* in two, *Enterobius vermicularis* in one, *Ascaris lumbricoides* in one, and *Strongyloides stercoralis* in one. Fourteen of the eighteen cases had two or more intestinal parasites. Case 9, who manifested an eosinophilia of nine per cent and in whom only *Trichuris trichiura* was found, suggests that in all probability a tissue invading parasite was missed on the stool examination.

Although nine of the patients had come to this country from Puerto Rico in the one year preceding admission to the hospital, nine others had been in this country from one to six years and still had intestinal parasites.

Nineteen of this group of patients were male, two were female. Twenty were admitted because of tuberculosis and one was admitted to the Chronic Disease Section with cirrhosis of the liver.

If one analyzes the discharge against medical advice rate in this series of twenty-one, it is slightly higher than the general AMA rate in this hospital. Furthermore, it is noted that over twenty-three per cent of these patients were food handlers.

SUMMARY

Although it is recognized that this is a small series of patients, it is striking that in twenty-one consecutive admissions of Puerto Ricans to the Uncas on Thames Hospital in the past five years, seventeen of eighteen in whom stool examinations were performed were found to have intestinal parasites. Sixteen of these patients had an eosinophilia of four per cent or more. In only one case was there an absence of eosinophilia in the presence of intestinal parasites. As the majority of this Puerto Rican group had intestinal parasites, it is important that one-fifth were food handlers. It is further suggested that an eosinophilia of four per cent or more should alert physicians to make a careful search for intestinal parasites in Puerto Ricans. A study is now planned whereby one hundred Puerto Ricans of random selection would be studied for the presence of eosinophilia and its relation to intestinal parasitism.

CONCLUSIONS

1. Among twenty-one consecutive Puerto Ricans admitted to the Uncas on Thames Hospital between October 1, 1953 and October 1, 1958, seventeen of eighteen in whom stool examinations are performed, had intestinal parasites.
2. Eosinophilia of four per cent or more should alert physicians to make a careful search for intestinal parasites in Puerto Ricans.
3. Screening procedures for intestinal parasites should be performed on Puerto Ricans before they are hired as food handlers.

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News From Washington

Senate bill 94 (The Johnson Bill) to provide fringe benefits health insurance for U.S. Workers and their families is under consideration by a Senate subcommittee. The attitudes of various interested groups varies so widely that the following excerpts from the WASHINGTON REPORT are given here in order that members of the State Medical Society may form their own opinions as to the desirability of such legislation and be prepared to record their attitude if requested.

U. S. Employees' Health Insurance Hearings End

Two more sessions terminated public hearings on Federal employees' health insurance before a subcommittee of Senate Post Office and Civil Service Committee. Additional workers' unions testified in favor of S. 94, the bill conferring liberal benefits and hanging two-thirds of cost on Treasury, one-third on the employee.

Manton Eddy, appearing in behalf of the major life and health insurance associations, stated that both S. 94 and the Administration's proposal of a more conservative, less costly program utilize patterns which have proved successful. He suggested a number of administrative guidelines, pledged full cooperation.

Similarly constructive was a statement filed with the subcommittee by AMA's executive vice-president, Dr. F. J. L. Blasingame. After indorsing health coverage on a voluntary, contributory basis, it discusses S. 94 section by section and offers numerous recommendations.

Deficit Of Hospital Beds

Population increases and hospital bed obsolescence require an addition of about 58,000 new beds annually throughout the nation, Rep. Fogarty told the House. Even with the money increase which was voted, and including hospital construction *outside* the Hill-Burton framework, it is estimated that only 47,000 beds will be added in 1959-60. "Accordingly," Rep. Fogarty appealed, "the proposed increase is essential if we are to avoid

making substantial additions to the considerable backlog of hospital and nursing home beds in this country."

Modernization Of Health Care Data Is Proceeding

Consumer costs unit in Bureau of Labor Statistics reports progress in its gradual overhaul of the mechanism for determining sums spent for health conservation—medical fees, drugs, hospitalization, etc.—in the nation's larger cities. While much still remains to be accomplished and it may be some months before price indices reflect changes, following are a few departures made to date:

Size of physician panels (suppliers of "typical" fee figures on a periodic basis) has been increased from six to 18 and composition of these panels made more selective, with reference to age, neighborhood location and type of professional practice; more prescription drugs have been added to the pricing list; a start has been made on enlarging dentists' panels, gathering special data on costs of maternity care and selection of new items for inclusion in the "hospital expense" category.

Austin Smith Joins PMA

Designation of Dr. Austin Smith as salaried, full-time president of Pharmaceutical Mfrs. Association (WRMS No. 605) was formalized at PMA's annual meeting in Florida. In his new post, the former JAMA editor will be based in Washington. Drug industry henceforward will manifest a closer interest in national legislation, with Dr. Smith as its No. 1 monitor and contact man.

Watters In Charge At GHA

Group Health Association, a consumer-controlled purveyor of medical services on a prepaid basis, got a new executive director. He is Frank Watters, formerly controller of Department of Medicine and Surgery in Veterans Administration. He is active in Fairfax County (Va.) civic affairs and is president of board of directors of North Virginia Mental Health Assn.

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FDA Post To Kessenich

Food and Drug Administration's new chief of medical division will be Dr. William H. Kessenich. A native Washingtonian, he has been with FDA since 1955 and deputy medical director since March, 1958.

Aerospace Medical Association To Be Based In Capital

Permanent headquarters will be established in Washington by Aerospace Medical Association, formerly Aero Medical Association. At annual meeting in Los Angeles, AeMA approved plans for placing Dr. William J. Kennard in full time charge of association's Washington headquarters, whose location will be announced later. For the present, it probably will be housed at Washington National Airport, where Dr. Ludwig G. Lederer is chief physician and medical director of Capital Airlines (he is AeMA's president for 1959-60).

Dr. Kennard resigned last year as head of AMA's Washington office. With AeMA, he replaces Dr. Thomas H. Sutherland, of Marion, Ohio, who served 12 years as secretary-treasurer. Dr. Kennard will have additional duties as executive director. Col. Robert J. Benford retains editorship of association's official publication, now renamed Aerospace Medicine. Elected first vice president and thus placed in line for presidency in 1961 was Capt. Oran W. Chenault, head of aviation medicine in Navy's Bureau of Medicine and Surgery.

National Academy Honors Other Names In News

Among 30 scientists elected recently to membership by National Academy of Sciences were the following: Herman Moritz Kalckar, professor of biochemistry at Johns Hopkins; Dr. William Barry Wood, Jr., vice-president of medical affairs, Johns Hopkins; Dr. Cecil James Watson, professor and head of department of medicine, Univ. of Minnesota; Carl Pfaffmann, professor of psychology, Brown Univ., and Frank Brink, Jr., biophysicist, dean of graduate studies at the Rockefeller Institute.

A cross-section of American leadership in medical research, philanthropy, government administration and politics packed grand ballroom of Hotel Mayflower at ceremonies honoring Senator Lister Hill (D., Ala.) for his decades of public service, particularly in the field of health.

Departing as an exchange mission to USSR to survey developments in endocrinology are Doctors DeWitt Stetten, Jr., and J. E. Rall, both of National Institute of Arthritis and Metabolic Diseases, and

Doctors Dwight J. Ingle, Univ. of Chicago; Rachmiel Levine, Michael Reese Hospital and Univ. of Chicago, and Edwin B. Astwood, of New England Medical Center and Tufts Medical School, Boston.

Meeting Records Progress On Revision Of VA Fees

Dr. Turner Camp, VA's key man in present round of negotiations of new fee schedules in "home town care" program, returned from an important conference in Chicago last month with hope of early settlement of major differences. Most of the states in which intermediaries process doctors' claims for VA payment were represented at the Chicago meeting, arranged under AMA auspices. While a couple of states are giving "some trouble," the meeting's cordial atmosphere was highly encouraging, said Dr. Camp.

All fee schedules are due to be adjusted upward and placed in effect July 1. Effectuation of the increases could be nullified if Congress declines to allow the \$800,000 request by VA to finance the revision. Meantime, the Federal agency is proceeding with greater certainty of execution to introduce administrative reforms designed to reduce paper work by physicians participating in this outpatient care program.

Labor Groups' Testimony

At recent hearings, organized labor registered unanimous approval of Johnston bill (S. 94), whose financial provisions and benefit structure are the most generous of any legislation of this kind yet introduced. The Neuberger subcommittee heard supporting testimony from AFL-CIO, Federal Postal Hospital Association, National Postal Transport Association, American Federation of Government Employees, National Federation of Post Office Clerks, International Association of Machinists and National Association of Postmasters.

All of the labor witnesses praised S. 94's latitude in choice of plans: Service type, indemnity type, group practice type. In this regard, Senator Neuberger voiced concern that unlimited freedom of choice might result in "a blitzkrieg of promotion and advertising, and then administrative chaos."

AHA Hits Deductibles

Dr. Robin C. Buerki, of Detroit, speaking for American Hospital Association, criticized the Administration's proposal to work deductible and co-insurance features into contributory health insurance for Federal employees. He questioned its justification as a deterrent to over-use of hospital facilities, warned that it might have dire results in some instances.

Mutual of Omaha

pays more than one million dollars
in benefits to Connecticut policyholders

That's the record for 1958. Mutual of Omaha cash benefit payments to Connecticut policyholders last year amounted to \$1,389,930.72.

This is a record payment, but Mutual of Omaha is continually setting records. It's the first company to pay out more than ONE BILLION DOLLARS in health and accident benefits in its first fifty years. More than 75 percent of that amount was paid out in the last ten years. Mutual of Omaha also pioneered the Lifetime Benefits feature of Income Protection Insurance, a feature that has helped thousands of families with cash every month during total disability.

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Blue Shield And Cross

Dr. Donald Stubbs, Washington physician and chairman of Blue Shield's national board of directors, testified that S. 94 is acceptable in principle but said it should be changed so as to permit Blue Cross and Blue Shield to compete for contracts on major medical coverage, as well as basic. J. Douglas Colman, vice president of Blue Cross Association, estimated that total annual cost of S. 94 would be \$313 million, which is well under the \$405 million predicted by Civil Service Commission. He gave it preference over the Commission's alternative scheme.

Group Practice Lauded

Donald B. Straus, vice president of Health Insurance Plan of Greater New York, urged that group practice prepayment plans be utilized under any program of prepaid coverage of Federal workers and dependents. "Plans like HIP," he said, "may very well represent the last line of defense for private medicine under our free enterprise economy."

New York's GHI, Inc.

Flexibility of coverage offered by Group Health Insurance, Inc., of New York was described by its spokesman. GHI serves as intermediary for coverage of nearly one-half million persons who may

choose from among medical services that best suit their needs.

Appearing in behalf of National Committee Against Mental Illness, Mike Gorman asked that any health insurance plan for U.S. workers accord same benefits for mental illness as it does for physical ailments. A statement directed to the same end was presented to the subcommittee by Foundation for Community Aid to Mental Patients.

US-GHI Trial Covers Prepaid Mental Care

Group Health Insurance, Inc., of New York City and the Federal government are collaborating in an experimental project whose possibilities are unlimited. National Institute of Mental Health has granted GHI \$300,000 to help finance a two-year program designed to combat mental illness with preventive medicine through medium of prepayment. In other words, government will subsidize private, voluntary health insurance so that it may broaden benefits without increasing charges.

Over a two-year trial period, a cross-section of 30,000 GHI members in Greater New York will be entitled to psychiatric services in office and hospital at a fraction of the actual cost. Major part of the expense will be borne by the \$600,000 special pool contributed in equal parts by GHI and National Institute of Mental Health.

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Book Reviews

CLINICAL OBSTETRICS AND GYNECOLOGY. Volume I, Number 4. A Quarterly Book Series. Edited by J. Robert Willson, M.D., and Daniel G. Morton, M.D. Published by Paul B. Hoeber, Inc., 49 E. 33 St., New York 16, N. Y. 279 pp. 1958. \$18.00 per year.

Reviewed by JACHIN B. DAVIS

This is an example of an interesting trend in medical publishing; a quarterly journal issued in book form, with sturdy "board" covers and good quality binding. The paper is excellent, the type large and clear, the illustrations sharp. The specimen under review is the fourth issue of the first volume, and consists of two parts. The first section is entitled "Symposium on Operative Obstetrics," and is edited by J. Robert Willson, M.D. The second part is called "Symposium on Genital Cancer," edited by Daniel G. Morton, M.D.

In the best editorial tradition, Dr. Willson and Dr. Morton have each written a foreword for his section, but in neither case does the editor inform this reviewer as to whom he intends to enlighten. In the face of this traditional modesty, the reviewer must reach his own conclusions which will be offered later.

Twenty-two articles have been contributed by a magnificent panel of widely acknowledged contemporary masters of the art and science of obstetrics and gynecology, embracing subjects ranging from forceps delivery to radical operations for recurrent gynecologic cancer.

The serious student will regret that necessity has limited each author to approximately 12.5 pages in which to develop his material. Considering this limitation, it appears to this reviewer that the authors have done a magnificent job; but this very limitation may narrow the reader's circle somewhat.

The medical student, the house officer, the general practitioner, the worker in the ancillary fields, and physicians specializing in other fields of medical teaching and practice will find this series a rapid means of keeping informed; but the specialist in obstetrics and gynecology may wish to supplement it with other publications of these masters.

THE ECOLOGY OF HUMAN DISEASE. By Jacques M. May, M.D. M.D. Publications, 30 East 60th St., New York 22, N. Y. 328 pp. \$7.50.

Reviewed by LOUIS H. NAHUM

The author is director of the medical geography department of the American Geographic Society in New York. In this first volume of a three volume work that will concern itself with some of the most important transmissible, degenerative and behavioral diseases, we find a study of the occurrence of transmissible diseases as they arise among human groups throughout the world through the combined workings of climate, biotics, social and economic factors. The diseases covered are cholera, brucellosis, poliomyelitis, tuberculosis, leprosy, bacillary dysentery, salmonellosis, amebiasis, yaws, nematode infections of man, scarlet fever, measles, trachoma. They are all studied under the framework of agent, vector, reservoir, host, and geographical distribution.

We have been so much in the habit of thinking of disease only in the terms of the individual and his "internal environment" that we have forgotten the importance of the individ-

ual's external environment. No clearer statement of the medical interrelationship between man and his environment can be obtained than in the ecology of human disease in Viet Nam. "It can be summed up thus: from the waters the people get their food, also their cholera, their dysenteries, their typhoid fevers, their malaria; from the earth they get their hook-worm, from the crowded villages they get their tuberculosis and their yaws; from the type of housing they have been forced to adopt they get their plague and typhus; and from the food which earth, temperature and rain produces, their protein deficiencies, their beri-beri." This kind of powerful writing is characteristic of the whole volume.

The first thing that strikes a reader is that the author's concept of health is broader than the dictionary definition of disease as "impairment of health." His own definition is "That alteration of living tissue that jeopardizes survival in their environment." In other words it is synonymous with maladjustment and emphasis is placed on the importance of organic survival in a particular environment. Disease is converted into an object of study for medical ecology that is, a study of the "seat" of disease. He does not neglect inherited and acquired features of individuals as they respond to stimuli, but he rounds out the totality of disease by adding the factors of the individual environment, that of races and populations which is medical geography. He charts the changing map of disease in time and space, in the world past and present. Knowledge of this map which is changing spontaneously but especially because of preventive and curative medicine is for Dr. May the key study of the nature and prevention of disease.

One of the innovations in this book is the study and integration of the cultural factors of disease. The interrelation between culture and disease occurrence offers three possible approaches to the mastery of disease—(1) building a protective wall between ourselves and a disease agent, e.g. mosquito net, shoes, boiling water; (2) changing the disease producing environment, e.g. drainage of marshes, mosquito eradication, snail or rat destruction, campaign use of antibiotics, and (3) changing the tissue response to damaging stimuli by immunization programs.

The book is basically written in the language of the physician. Every disease is dealt with historically and descriptively as well. Nevertheless it is of great importance to anthropologist, social scientist and human geographer as well. In it is found treatment of man and earth, man's travels, medical geography and history all pointing towards a geography of health.

In a foreword Dr. Felix Martí-Ibáñez who is presently professor and director of the department of the history of medicine at New York Medical College brings the development of medical ecology into focus and his friend, Dr. May into clear relief as a great thoughtful original mind that has charted unknown areas in a geography of health, has produced a global approach to disease problems and integration in medicine of the human being and his environment. The introduction ends on a lofty note, "The book is a blazing pennant announcing a new perspective in the study of disease ecology. With his philosophic concepts and his vast labor Dr. May is the standard bearer in that noble crusade for the conversion of the ecology of disease into a hopeful geography of health." It is indeed wonderful to have understanding friends that can portray an author's qualifications which modesty would prevent the author himself from stating.



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Around The State

Eugene M. Blake Receives Helen Keller Award

The Connecticut Chapter of the National Society for the Prevention of Blindness, in grateful recognition of his distinguished and unique role in the Prevention of Blindness and the Conservation of Vision in Connecticut, in the United States, and abroad, presented its Helen Keller Award of 1959 to Eugene M. Blake.

Born in Bridgeport, Connecticut, Dr. Blake graduated from the Bridgeport High School and the Yale University School of Medicine, and took his internship in the Hartford Hospital. The people of our three largest urban areas of the State, therefore, have a special feeling of possession and of pride in the accomplishments and contributions of a native son. It is fitting that Dr. Blake should be the first recipient of the Helen Keller Award which was established recently to honor Connecticut citizens who make an outstanding contribution toward the prevention of blindness.

In the front ranks of ophthalmologists for some 45 years, he served as President of the American Ophthalmological Society, of the New York Ophthalmological Society, of the New Haven Medical Association, and of Yale Men in Medicine, while occupying also the chair of Clinical Professor of Ophthalmology in the Yale University School of Medicine, and being active as a Fellow of both the New York Academy of Medicine and the American College of Surgeons. He has been a valued member of the glaucoma committee of the Sloane Foundation, and of the board of directors of the Ophthalmological Foundation and of the National Society for the Prevention of Blindness, among other organizations. He is the author of numerous scientific publications and a consultant to several governmental and voluntary agencies and hospitals.

Hundreds of grateful patients and their families pay tribute to him as a skillful and thoughtful physician and friend and as a leader in constructive research and services for the conservation of sight.

New Haven County

The orthopedic section of the State Medical Society at its annual meeting held in New Haven April 30th, discussed at length the recent action of CMS in extending payments to chiroprodists for certain surgical procedures listed in its contract. Several members having previously expressed concern, the executive committee of the section had thoroughly explored the background of this move. The members were presented with this factual material, and in the ensuing discussion made clear their serious views of the matter. The section

adopted resolutions, directing its secretary to bring them to the attention of the council and executive secretary of the State Medical Society; and the director of Medical Services, chairman and orthopedic representative of the Medical Advisory Committee of CMS.

Barnett Greenhouse addressed the clinical session of the Phi Lambda Kappa Fraternity in Miami Beach, Florida on April 6th. He spoke on the "Clinical Value of Chlorpropamide."

Sterling B. Brinkley, director at Gaylord Farm Sanatorium, announces the appointment of Josephine Fuhrman to the medical staff at the sanatorium.

Dr. Fuhrman will work under the direction of Harold C. Anderson, Gaylord's chief of medicine.

Frank Mongillo of New Haven was the recipient of the New Haven Advertising Club's twenty-third annual gold medal award for outstanding community service at the annual banquet of the club at the New Haven Lawn Club on May 11th. Previous recipients of this award were such noted New Haven residents as former governor, Wilbur L. Cross, William Lyon Phelps, William F. Verdi, David R. Lyman and Carroll C. Hinks. The large attendance of nearly four hundred persons at the banquet was in itself a testimonial to Dr. Mongillo and his long period of unselfish community activity.

Hartford County

T. Stewart Hamilton, director of Hartford Hospital, left recently to attend a meeting of the Society of Medical Administrators in San Juan, Puerto Rico.

John F. McGrath was re-elected president of the medical staff of McCook Memorial Hospital at its annual meeting. Other officers are Loftus Walton, vice-president and Neville Kirsch, secretary. Appointed to the honorary staff were Bernard Spillane, John W. Larrabee and Albert T. Keith.

Maurice Pike attended a national conference in New York recently of local chapters of the medical advisory committees of the National Foundation. Subjects discussed were improved treatment and prospects for prevention of arthritis and birth defects.

New first vice-president of the New England Hospital Assembly is Isidore S. Geetter, director of Mt. Sinai Hospital. Next year he will serve as president.

Tolland County

The 1959 annual meeting of the Tolland County Medical Association was held on April 21st at the Olde Homestead Inn in Somers. Guests included



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Dr. Russell, President of the State Society, Dr. William Upson, Hartford County Delegate, Mr. Howard Bierkan of CMS, Dr. Stanley Osborn, State Health Commissioner.

Dr. Amos Friend of Manchester spoke briefly concerning the endeavours and accomplishments of the World Medical Association. The chief speaker was Mr. Norman Dacey of Bridgeport who gave an extremely lucid discussion of financial planning for the physician, with particular emphasis upon the dangers and pitfalls of inflation, and upon the use of mutual funds in estate planning. Most of his comments had been previously touched on in his excellent article in the Connecticut State Medical Journal a few months ago.

Officers elected at the business meeting were Francis Burke, president; Marjorie Purnell, vice-president; R. B. Thayer, Jr., secretary-treasurer; Alfred Schiavetti, councilor, and Wendelin Luckner, state delegate.

The main part of the business meeting was devoted to a discussion of the Medical Care Program of the State Welfare Department.

The discussion was precipitated by the recent adoption by The State Welfare Department of W-506 prescription form and the regulations concerning it, and concerning refills, needed authorization for use of certain types of medication, etc. There was no discussion or complaint about the fee schedule for the care of State Welfare patients.

1. It was agreed that a physician should have a right to use his own prescription form for State Welfare patients, as for any others of his patients.

2. It was agreed that the aim of the State Welfare Department's medical care program should be to provide complete and adequate medical care for the indigent or elderly who depend in part or in full upon the state for support.

3. It was agreed that state aid patients should receive the same care as indicated for any other patient, and should receive whatever care or medication the attending physician feels is indicated, without restriction or prior authorization. It was further agreed that there should be no restriction on vitamins, when indicated, and that seeking prior authorization for their use is needless, time-consuming paper work. It was felt that it is not possible to dictate from an office in Hartford what medications may or may not be prescribed.

4. The subject of prescription refills was discussed. It was concluded that refills should be freely authorized when indicated by the attending physician. It seems ridiculous to require a new prescription each time a patient runs out of medicine. This is particularly true of such medications as digitalis, insulin, Orinase, Priscoline, etc., which are usually administered upon a continuous and long term basis. If a patient has to be seen by a physician

each time he requires more medicine, it is likely to result in increased medical care costs to the state.

5. The amount of paper work required in caring for state aid patients has become intolerable. The amount of paper work necessary in caring for a state aid case usually requires more time than does the actual professional visit or service rendered. For example: to collect \$3.00 for an ordinary office visit, it is necessary to fill out one W-500 form (one copy), Monthly Bill form W-501 (three copies), one form W-506 (two copies) for each prescription—a minimum of six sheets of paper per visit. If special authorization for a drug, appliance or service is needed, more forms must be filled out. This seems ridiculous, and means that as much, or more, time is required to fill out the forms (all of which are repetitious and require the recording of essentially the same information) than is consumed in the professional service to the patient. State aid cases require more paper work for less compensation than any type of prepaid medical care, Blue Shield, Workmen's Compensation, etc.

6. If a physician is willing to take care of state aid cases for a fee which is nearly always less than his customary fee for his own private cases, the amount of paper work required should be minimized.

7. The state aid program for medical care is ignoring more and more the welfare of the patient, and each new restriction, regulation and administrative form imposes upon the rights and welfare of the patient, and upon the freedom of medicine.

8. It was the understanding of those present that the new prescription form W-506 was adopted by the State Welfare Department without consultation with the State Medical Society Committee "Advisory Committee to the state commissioners of welfare, finance and control," and this is to be deplored.

9. It was unanimously agreed that a prompt and thorough consideration of the forms and administrative procedures and restrictions of the State Welfare Department's medical care program should be undertaken by the above mentioned committee, the State Medical Society and the State Welfare Department, and that action should be taken to simplify and reduce the intolerable amount of paper and administrative work required at present, in the care of State Welfare Patients.

10. It was emphasized that the primary duty and mission of the physician is medical care of his patient, not filling out forms. The physicians of Tolland County Medical Association are pleased to cooperate in the care of state welfare patients, but they feel that the administrative procedures and policies of the State Welfare Department medical care program must be improved and simplified.

R. B. THAYER, JR., M.D., Secretary
Tolland County Medical Association

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Middlesex County

The annual meeting of the Middlesex County Medical Association was held at the Commodore Macdonough Inn in Middletown on April 9th. Officers elected for the coming year are Clarence Harwood, president; Raymond James, vice-president; and Herbert Levine, clerk. The address of the evening was on the "Professional Theater Today" given by Ben Segal, director of Oakdale Playhouse.

Vincent J. Vinci attended the sectional meeting of the American College of Surgeons at Montreal early in April.

Richard Grant attended the meeting of the International Anesthesia Society in Miami.

Harry Whiting and Sal Prins were in Philadelphia for the annual meeting of the American Psychiatric Association.

The Doctor's Office

Sumner Goldenthal, M.D. announces the opening of an office for the practice of radiology at 357 Whitney Avenue, New Haven.

Sung J. Liao, M.D. announces the removal of his office for the practice of physical medicine to 155 Grove Street, Waterbury.

William A. Sinton, M.D. and Robert P. Fornshell, M.D. announce the removal of their offices from 345 Main Street to 85 Osborn Street, Danbury for the practice of orthopedic surgery.

Cerebral Palsy Study Is Begun

The Public Health Service announced an "unprecedented" program aimed at finding the causes of cerebral palsy and other neurological ailments of infancy.

Some 40,000 women will be studied over a five-year period under the already-started project that is being carried out in collaboration with 12 hospitals. The women will be observed by specialists from the early months of pregnancy through childbirth to determine whether pre-natal causes are responsible for palsy.

U. S. Surgeon General Leory E. Burney said it marks the first time a program of such scope has been undertaken. Most research heretofore has been done after the illness became known. Under the new plan, a cross-section of pregnant women at the hospitals will be studied and detailed records kept of their activities prior to childbirth.

Dr. Burney said it is expected that valuable information will be gathered not only on cerebral palsy but on deafness and blindness of children and on the condition of pregnancy, itself.

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Serious Manpower Shortage Predicted

A serious manpower shortage is in sight in the health professions, according to George W. Albee, Ph.D., director of the Joint Commission on Mental Illness and Health's Task Force on Manpower.

Unless positive action is taken, Dr. Albee told the ninth annual meeting of the Pennsylvania Health Council at Harrisburg, "there will be less professional help available in the future than at present."

WOMAN'S AUXILIARY

President

Mrs. Walter Nelson, Cromwell

President-Elect

Mrs. Morton Arnold, Windham Center

First Vice-President

Mrs. John D. O'Connell, West Hartford

Second Vice-President

Mrs. J. Henry Kott, Torrington



Recording Secretary

Mrs. Saul Karpel, New London

Corresponding Secretary

Mrs. Louis Soreff, East Hampton

Treasurer

Mrs. Fritz Meyer, Bridgeport

Mrs. Walter Nelson, President of the Woman's Auxiliary to the Connecticut State Medical Society for 1959-1960 has announced the appointment of the following State committee chairmen to serve for the coming year.

A.M.E.F.—Mrs. Winthrop Welch, Winchester Center.

Editor—Mrs. Paul W. Tisher, 389 Shuttle Meadow, New Britain.

Finance—Mrs. Nicholas Creaturo, 10 Rockland Rd., Trumbull.

Historian & Necrologist—Mrs. Edwin R. Connors, 416 Boston Ave., Bridgeport.

Hospitality—Mrs. Willard Buckley, Ballfall Rd., Middletown;

Mrs. George Rosenbaum, 16 Vardon Rd., West Hartford.

Legislation—Mrs. Sawyer Medbury, Windham Center; Mrs. Irving Krall, 50 Pilgrim Rd., West Hartford.

Membership—Mrs. John D. O'Connell, 42 Fulton Place, West Hartford.

Mental Health—Mrs. Richard B. Brown, 49 Belcrest Rd., West Hartford.

National Bulletin—Mrs. Newell Giles, 39 Leeuwarden Rd., Darien.

Parliamentarian—Mrs. C. M. Gratz, 27 East 79th St., New York, New York.

Program—Mrs. J. Henry Kott, 28 Pearl, Torrington.

Community Service Rural Health—Mrs. John N. Gallivan, 22 Westview Dr., East Hartford.

Recruitment — Mrs. Edward Allen, 505 Ridge View Rd., Orange.

Revision—Mrs. F. Erwin Tracy, 202 Old Mill Rd., Middletown.

Safety & Civil Defense—Mrs. William Richards, 116 Brook St., Hamden.

School Health — Mrs. Charles Meredith, c/o Conn. State Hosp., Middletown.

Publicity—Mrs. Harry Knight, 410 Ridge Rd., Middletown.



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Opinion Survey

The following text was approved unanimously by the Council on April 22, 1959 and by the House of Delegates on April 28, 1959.

The Council is more than just an executive committee. It is, among other things, a listening post through which pass many expressions of medical opinion, both written and oral. Since the incumbent Council first met in May of 1958, it has been continuously apparent that the one professional thought uppermost in doctors' minds concerns Connecticut Medical Service, Inc.

Today, despite the fact (or perhaps because of it) that the relationship between the State Medical Society and CMS is much sounder and more harmonious than has been the case for many years, there is still considerable disagreement among many members and segments of the Society as to the role this Blue Shield plan should play in Connecticut medicine.

It is obvious that there are a few die-hards among us—a small number of rugged individualists—who never wanted any part of this plan or any other. They have never participated in it and never will, no matter what terms may be offered to the subscriber and his physician. To them, any such program is pie-in-the-sky, illogical and impractical; unfair and unworkable.

At the other end of the scale is a much larger group—possibly even a third of the Society's members—who are completely satisfied with the present terms and schedule of payments provided them under the Preferred Contract and who would be even more pleased if the payments for their services were to be increased under the terms of a new contract. They express no interest in limiting income levels and apparently would accept, without question, a \$7,500 or even an unlimited service benefit arrangement. They evidently feel no concern about the possibility of CMS or some other Third Party agency ultimately dictating the terms and policies under which they and their colleagues will be allowed to practice their profession.

Somewhere in between these two extremes appears to lie the thinking of the majority of our members. This large group is keenly aware of the threats of Socialism and Unionism and devoutly hopes that it is still possible to preserve freedom in the practice of medicine. These men abhor the thought of national health insurance, with its obvious attendant evils, and they earnestly and sincerely desire to support all voluntary plans. For over ten years, most of them have accepted "reduced fees" in the interest of making prepayment for some medical and most surgical services available, at small cost, to people of low individual and low family income.

Since its inception, they have looked upon CMS largely as a philanthropic venture, which has simultaneously served as a deterrent to the advance of the federal government toward socialized medicine. They have always thought of this program as an unselfish gesture of assistance and good will toward the underprivileged and, at the same time, as an admittedly selfish measure of protection against those who would deprive doctors of their inalienable rights by the enactment of discriminatory laws. Confirmed anti-Marxists,

they believe there is no place in America for socialization—either of themselves or of anyone else. They persist in this belief despite the criticisms which are being constantly heaped upon their heads by the liberals in government and in the labor movement, and despite the blandishments of the do-gooders who are unremitting in their efforts to entice the public into adopting the increasingly popular philosophy that it is better to receive than to give.

As a result of this very real fear of bureaucratic control, in 1948 they somewhat reluctantly signed over to the CMS directorate the right to determine what constituted a "low" income level, and they have, since 1954, somewhat dubiously accepted that level to be \$5,000 a year. To a great many of these doctors, this has seemed to be placing something of a strain on the limits of their philanthropy, but they have nevertheless continued to participate in the plan. However, when CMS arbitrarily raised the family service benefit level to \$7,500 in the early Spring of 1958, a wave of protest of undeniable magnitude quickly and spontaneously developed among a majority of the Society's members. This violent reaction was triggered by an explosive mixture of deep resentment toward the manner in which the Integrated Contract was formulated and toward the deplorable quality of professional relations and liaison manifested by the CMS organization. This resentment was greatly fortified by the belated realization that the Medical Society had little or no true representation in the CMS program and by a fundamental disagreement with the concept that a family income of \$7,500 a year could or should be considered "low." It was apparent that something was wrong and badly in need of correction.

In the ensuing controversy, the public was for long months witness to the sorry spectacle of physicians quarrelling among themselves, denouncing their elected officers, and even charging conspiracy within their ranks. Through no fault of their own, other than apathy toward the business of organized medicine and lack of sound medical policies, Connecticut doctors fell heir to a wave of unfavorable publicity and bad public relations which has done the profession irreparable damage. Oddly enough, the CMS organization emerged relatively unscathed, having received numerous testimonials of public confidence and support during the conflict.

But now all that has passed and the controversy has been resolved. Right has prevailed and the Integrated Contract has been permanently withdrawn from sale. The representation of the State Medical Society has been increased and strengthened and the CMS by-laws have been satisfactorily amended. Most doctors fervently hope that confidence in the plan may be rapidly restored and that all members of the Society may wish to enter into or resume participation in the program. They recognize that there is a need for improved professional and public relations on the part of CMS and a special need for searching and sustained interest in the medical practices and policies of Blue Shield on the part of all members of the Society. Only in this way can future misunderstandings and dissatisfactions be avoided.

The burning question is: Where do we go from here in our efforts to build solidly for the future in our relationship with the organization to which we give sponsorship and support? For example, many physicians indicate they are now aware that Blue Shield policy has long since divorced itself from any concept of philanthropy and that far from

seeking primarily to provide a prepayment plan for people with low incomes, national policy aspires to give service coverage to *at least 75 per cent* of all subscribers. These men express concern that this new concept appears to be at considerable variance with that held by the Society at the time when CMS was approved for sponsorship back in 1948. It seems to them that if CMS is no longer a philanthropic venture, operated chiefly for the benefit of the underprivileged, then indeed it must be considered a business venture and should be formally represented as such both to the profession and to the public.

With no implication that they are factual or based on a poll or referendum, the points of view of the substantial middle-of-the-road group of the Society's members may be expressed somewhat as follows:

(1) That the members of the Society should not be placed in the embarrassing position of waiting, with varying degrees of apprehension, to learn what new terms have been established by CMS under which their services are to be sold, or what new plan has been developed by CMS to solve problems which it is the responsibility of physicians to solve for themselves.

(2) That, instead, the Society must take the initiative in all matters pertaining to medical policy and transmit its official decisions in these matters to the CMS organization through carefully chosen representatives, so that these policies may be known to the several CMS boards and be given proper consideration *before and during* contract development, *not* afterward.

(3) That in adopting sound and positive principles in this area, the Society must utilize all its facilities, including opinion surveys, to assure that its official decisions are based on true, grass-roots opinion and not merely on the potentially biased attitudes of small segments of the membership. Recognizing the inevitability of disagreement on matters of minor detail, agreement on matters of major importance must be sought.

(4) That the service benefit concept is a unique feature of Blue Shield medical care plans and, however worthy in intent, has no counterpart in any other business endeavor which offers to sell goods and services to the public. Service coverage, therefore, should be reserved exclusively for the benefit of low-income subscribers to these plans and it is the duty of members of the Society to come to a definite agreement as to what "low income" shall mean in this regard. The responsibility for making this determination must not be delegated to any outside agency.

(5) That the present CMS practice of attempting to accomplish an equitable schedule of payments to physicians by upgrading the admittedly low service benefit schedule, a little at a time, is unsatisfactory and should be abandoned. Such a practice fosters, rather than discourages, the extension of service coverage to subscribers in higher and higher income brackets, increases the cost of contract to all subscribers, and at the same time fails to provide realistic indemnity coverage for the over-income policy holders.

(6) That for this reason, through relative value studies, the Society should establish a sound schedule of payments for medical and surgical services to which the great majority of its members can and will agree, and by which they will be morally obligated to abide. Such realistic assessments of the true relative value of physicians' services may then be voluntarily downgraded under one or more service bene-

fit contracts especially designed to serve the needs of all low-income subscribers, with appropriate reduction of premium to those people who can least afford to purchase a prepayment plan.

(7) That in their efforts to ward off the socialization of medicine by the federal government, physicians must not submit to other forms of pressure to such a degree that the word "voluntary" eventually becomes meaningless. There is no reason to believe that voluntary socialization will have any particular advantage over compulsory socialization.

(8) That the Society should therefore take a firm stand against the growing tendency to allow the representatives of management, labor and other economic pressure groups to dictate the terms of medical care contracts; to "demand" that coverage be made ever broader and to paradoxically "insist" that premiums be kept at a pennies-a-day level. The "Consumers of medical care," as they choose to call themselves, have no legal or moral right to place such unfair, unrealistic and impossible controls on the development and sale of health insurance plans. They themselves characteristically deny such control to all other consumers who must, in the American tradition, depend on competition to make possible the purchase of quality goods and services at reasonable prices. There must be no recognition given by doctors to a double standard of conduct such as this.

(9) That the Council is the agency of the Society which must take the lead in these matters, conduct opinion surveys among the membership, formulate official policy based on the results of these surveys, and forcefully and effectively make this policy known to CMS, to private insurance carriers and to the general public.

(10) That in these actions, doctors should demonstrate cooperation, good will, good faith, constructive thinking and a desire to seek broad areas of agreement among themselves and with all allied organizations in the medical care field.

WILLIAM R. RICHARDS, M.D.

Executive Secretary

Over-65 Plan To Be Offered

Surgical, medical, hospital and nursing home care insurance for persons 65 and over will be offered May 1 by Wisconsin Physicians Service, the Blue Shield plan of the State Medical Society of Wisconsin.

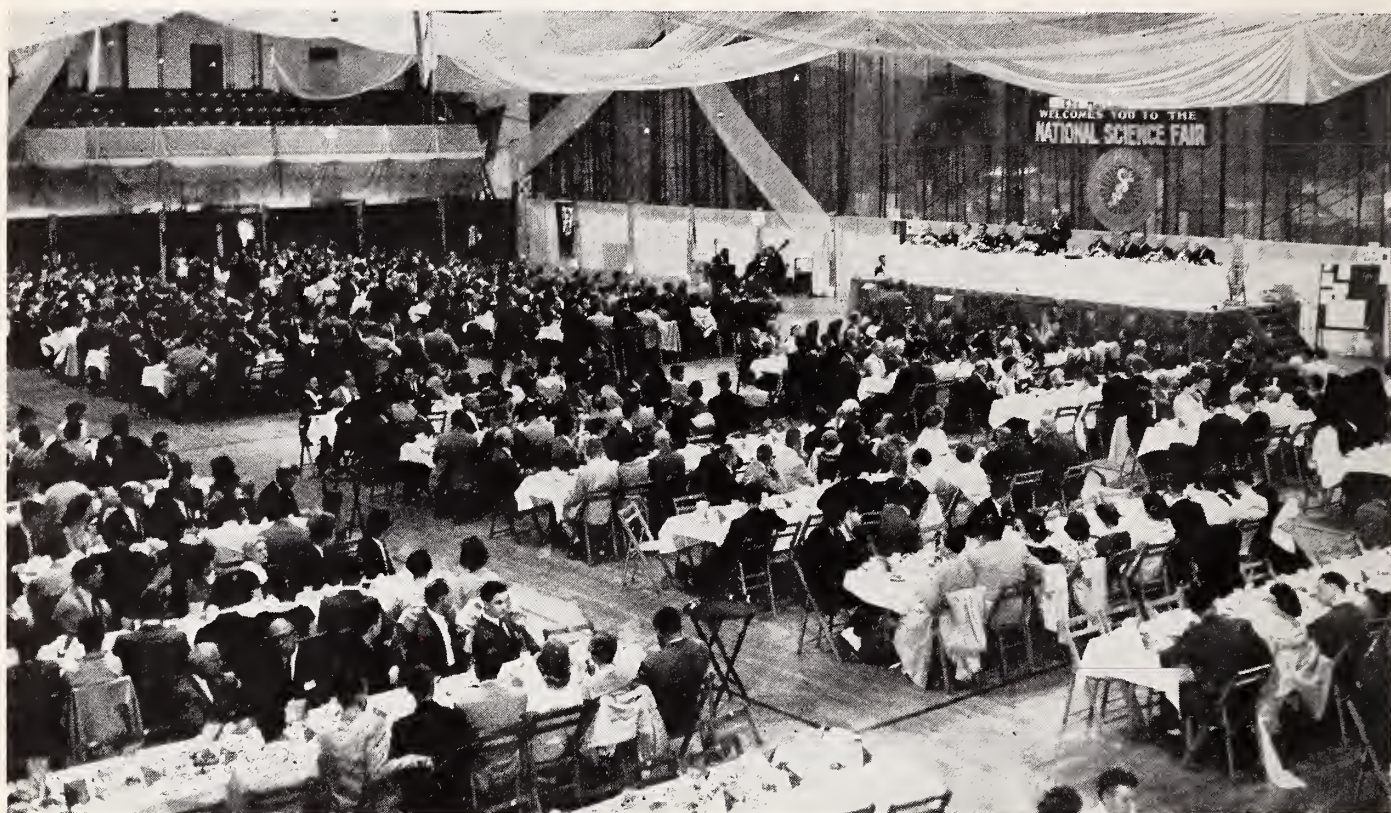
Monthly premiums for the "Century Plan" will be \$9 per person.

Physicians' services will be paid according to a fee schedule. The 2,800 physicians who participate in WPS-Blue Shield will accept benefits paid by "Century Plan" as full payment when the policyholder's annual income is under \$2,000 as a single person or \$3,600 for a couple.

The "Century Plan" will pay up to \$10 per day for hospital room and board expenses for the first 60 days of each confinement and 100 per cent of miscellaneous hospital expenses.

Nursing home benefits, up to \$10 per day for room and board, will be paid within the same 60 day period when patient is transferred directly from a hospital to a nursing home.

Hartford Scene of Tenth National Science Fair



Dr. Ellwood C. Weise, president of the Connecticut State Medical Society left, inspects one of the student awards at the 10th National Science Fair May 7 in Hartford with Dr. Louis M. Orr, president of the American Medical Association, center, and Dr. Benjamin L. Salvin, president of the Hartford County Medical Association. Dr. Weise was master of ceremonies at a banquet in the State Armory which highlighted the three-day event.

More than 1,000 high school students, parents and guidance counselors attended the affair and a portion of the banquet hall is shown in the photo above.

Exhibits in physical and biological science were displayed by students from every state and territory and from Germany and Japan.

The Hartford County Medical Association was host for the national event, which was sponsored locally by the *Hartford Times*. The National Science Fair is conducted annually through the Science Clubs of America and the American Medical Association is a participating organization.



Annual Meeting of the House of Delegates

Hamden High School — April 28, 1959

Actions On Recommendations Of The Council

ASSOCIATE MEMBER

Mr. Earle K. Borman, West Hartford; B.S. Rutgers University 1923; M.S. University of Kentucky 1930; Section Chief, Laboratory Service Section, Connecticut State Department of Health, was unanimously elected to Associate Membership in the Connecticut State Medical Society under the provisions of Article 5, Section 5, Paragraph 1 of the By-laws.

EMPLOYMENT OF GENERAL MANAGER

Under the terms of a contract published in the Agenda and previously published verbatim in *CONNECTICUT MEDICINE* April issue, it was VOTED unanimously to employ William R. Richards, Hamden, as General Manager of the Connecticut State Medical Society for an initial term of five years from effective date. The Speaker of the House pointed out, in relation to this decision, that it is planned to delete the word "Executive" from the title of the office of "Executive Secretary" by amending the By-laws at the semi-annual meeting in December, 1959. The constitutionally elected officer will then be known as the Secretary, and all duties previously assigned to the Executive Secretary will officially be assumed by the General Manager, under the direction of the Council and the House of Delegates.

RESOLUTIONS

The "three resolutions" which had been submitted to the city societies and county associations for information, consideration and discussion were amended and adopted by the House of Delegates as follows:

RESOLUTION RE:

"FREE CHOICE OF PHYSICIAN"

BE IT RESOLVED: That the Connecticut State Medical Society believes that freedom of choice by the patient from among all physicians in the community who are willing, qualified and available to perform the essential services is a fundamental principle and essential to good medical care.

RESOLUTION RE:

"CLOSED PANEL SYSTEMS"

BE IT RESOLVED: That the Connecticut State Medical Society is opposed to so-called "closed panel systems" and encourages its members to support systems of medical care which assure to the patient freedom of choice from among all those physicians in the community who are willing, qualified and available to perform the essential medical services.

RESOLUTION RE:

"CARE OF THE AGING"

BE IT RESOLVED: That the Connecticut State Medical Society pledges its continued support to the development of effective health insurance and prepayment programs for all individuals, including the group over 65.

A supplemental resolution relating to "Care of the Aging" was considered by a reference committee and was adopted by the House of Delegates as follows:

SUPPLEMENTAL RESOLUTION RE:

"CARE OF THE AGING"

WHEREAS: The Connecticut State Medical Society has this day pledged its continued support to the development of effective health insurance and prepayment programs, available to all individuals, including the group over 65, and

WHEREAS: Connecticut Medical Service, Inc., in making universally available the Special Individual Contract, has anticipated this further pledge of support by its sponsor, the Connecticut State Medical Society, therefore

BE IT RESOLVED: That Connecticut Medical Service, Inc. be publicly commended by the Connecticut State Medical Society for its initiative, foresight and willingness to co-operate with the physicians of Connecticut in the provision of this low-cost prepayment plan for people of all ages with modest resources and low family income, including those over 65.

PROPOSED NEW CONTRACTS OR MAJOR CHANGES IN EXISTING CONTRACTS OF CMS

The following "Suggested method by which the Connecticut State Medical Society may expeditiously act upon a request by the Board of Directors of CMS, Inc. for approval of a proposed new contract or proposed changes in an existing contract" was considered. The original document was amended by the addition of Article XI and adopted by the House of Delegates.

"I. Upon receipt by the Council of a request from the Board of Directors of CMS, Inc. for consideration of a proposed new contract or proposed change in an existing contract, the Council shall study the proposal in order to ascertain that it is submitted in complete detail and in final form.

"II. Having ascertained that the proposal is submitted in complete detail and in final form, the Council shall then act upon the proposal.

"III. Following the action taken in accordance with Paragraph II, the Council shall then refer the proposal together with the recommendation of the Council to the: A. Standing Committee on Third Party Payments, and to the B. Councilor from each component County Association.

"IV. It shall be the duty of the Standing Committee on Third Party Payments to study the proposal and to make its report, with recommendations through the Council, to the next regular meeting of the House of Delegates, or to a special meeting of the House of Delegates called for this purpose.

"V. It shall be the duty of the Councilor of the component county association to submit the proposal to the Committee on Third Party Payments of his County Association, if such there be; and to report the proposal together with the recommendations of the Council to his County Association at its next regular meeting, or at a special meeting called for the purpose of receiving this proposal.

"VI. It shall be the further duty of the Councilors of the component county associations to report the actions taken by the county associations with respect to the submitted proposal

to the next regular meeting of the Council, or to a special meeting of the Council called for this purpose.

"VII. It shall then become the duty of the Council to consider the actions taken by the county associations, and to report them, together with the recommendations of the Council, to the next regular meeting of the House of Delegates, or to a special meeting of the House called for this purpose.

"VIII. It shall be the duty of the House of Delegates at any regular meeting or at a special meeting called for the purpose, to receive and consider the A) Report and recommendation of the Committee on Third Party Payments with respect to such proposal, and the B) Report of the Council concerning the actions taken by the component county associations with respect to such proposal, and the C) Recommendations of the Council with respect to such proposal.

"IX. Having received the reports and recommendations as outlined in Paragraph VIII, the House of Delegates shall act to approve or disapprove the proposal advanced by the Board of Directors of CMS, Inc.

"X. Promptly upon completion of the action of the House of Delegates as specified in Paragraph IX, the Executive Secretary shall inform the Board of Directors of CMS, Inc. of the action taken by the House of Delegates with respect to the proposal.

"XI. Not more than six (6) months shall elapse between receipt of a proposal as outlined in Article I and the consummation of action as outlined in Article X."

MOTION RE CONDUCTING AN OPINION SURVEY

Based on a text printed elsewhere in CONNECTICUT MEDICINE, the following motion was adopted unanimously by the House of Delegates:

WHEREAS: In the development of prepayment contracts by Third Party agencies under which it is proposed to sell physicians' services, it is only logical that the direction of flow of communications regarding the medical policies of such Third Party agencies must be *from* the physicians whose services are to be sold *toward* those agencies which propose to sell them, and

WHEREAS: If sound, positive medical policies are to be transmitted to the directors of Third Party agencies by the Society, either through carefully chosen representatives or by other means, the Society must take the initiative in determining the exact nature of the policies which the majority of its members desire to be so transmitted in their name, and

WHEREAS: To properly accomplish this determination, the Society must utilize all the facilities at its disposal to assure that such policies reflect the true, majority opinion of the entire membership, and that each member has full opportunity to express his personal views as to schedules of payments, service benefit income levels, relative value scales and allied matters which pertain to the terms of contracts under which he will permit his services to be sold by a Third Party, and

WHEREAS: The establishment of these principles and policies through this mechanism will immeasurably enhance and strengthen the ability of the Society to reach durable and mutually satisfactory agreements with all agencies which share the doctors' interest in providing a high quality of medical care to the public at reasonable cost, therefore it is

MOVED: That the Council shall, without delay, proceed to implement the foregoing principles by conducting an opinion survey among the members of the Connecticut State Medical Society, obtaining such technical assistance as it may

require, for the purpose of establishing positive medical policies designed to aid all Third Party agencies in the development of fair and equitable plans which will provide prepayment for physicians' services.

Other Actions

WELFARE DEPARTMENT PRESCRIPTION BLANKS

Resolutions from the Hartford County Medical Association and the Middlesex County Medical Association, both expressing dissatisfaction with and protest against the new prescription forms issued by the State Department of Welfare for use in prescribing drugs for welfare patients, were accepted by the House of Delegates and referred to reference committee. A resolution of the House, proposed by the reference committee was adopted as follows:

"The Reference Committee recommends that this House take favorable action on the two related resolutions objecting to the new Welfare Department prescriptions; that copies of the action taken by the Connecticut State Medical Society be sent to the Governor and the Commissioner of Welfare; and that all previous unilateral action by the Welfare Department be rescinded since a proper liaison advisory committee of the State Medical Society exists for such deliberations."

Election Of Officers And Committees

Following the presentation of the report of the nominating committee of the Council, there were nominations from the floor for only four posts, these being: President-elect, Second Vice-president, AMA Delegate and Alternate AMA Delegate. Since the alternative slate was identical with that of the nominating committee regarding committees, it was VOTED that the Executive Secretary cast one vote for the candidates for committee appointments. The election of officers was then conducted separately and by secret ballot.

Elections were unanimous except as follows:

Nominating Committee

President-elect John N. Gallivan-64
2nd Vice-president Roy C. Ferguson-65
AMA Delegate Norman H. Gardner-66
Alternate AMA Delegate Henry A. Archambault-54

Conservative Group

President-elect Clyde L. Deming-57
2nd Vice-president Francis Gallo-56
AMA Delegate Max Kaplan-55
Alternate AMA Delegate Vincent A. Gorman-67

THE OFFICERS ELECTED ON APRIL 28, 1959

President—Elwood C. Wiese, Sr., Bridgeport
President-elect—John N. Gallivan, East Hartford
1st Vice-president—Gray Carter, Greenwich
2nd Vice-president—Roy C. Ferguson, Rockville
Treasurer—Isadore S. Goldberg, Torrington
Executive-Secretary—William R. Richards, New Haven
Managing Editor—Denis S. O'Connor, New Haven
Literary Editor—Louis H. Nahum, New Haven
AMA Delegate (1/1/60-12/31/61)—Norman H. Gardner, East Hampton
Alternate AMA Delegate (1/1/60-12/31/61)—Vincent A. Gorman, Bridgeport
Councilor-at-Large—Jachin B. Davis, New Haven
Speaker of the House—Thomas M. Feeney, Hartford
Vice-Speaker of the House—Michael R. Scully, Bridgeport

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ANNUAL REPORTS

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1958 - 1959

The following reports were presented to the House of Delegates and appear as accepted. All reports, as originally submitted are on file in the Secretary's Office.

REPORT OF THE MANAGING EDITOR OF THE JOURNAL

At the annual meeting of the House of Delegates in April, 1958, Dr. David Monahan of Bridgeport was elected managing editor of the CONNECTICUT STATE MEDICAL JOURNAL and Dr. Louis Nahum of New Haven was elected literary editor.

The position of managing editor of the JOURNAL had been held by Dr. Stanley Weld of Hartford from its inception in 1936, until the election of Dr. Monahan in 1958, a total of twenty-two years. It seems only fitting that the devoted service of Dr. Weld to the development of the JOURNAL be recognized at this time. The CONNECTICUT STATE MEDICAL JOURNAL has long been established as one of the outstanding publications of its type in the United States and Dr. Weld deserves the thanks of the Society for the splendid work he did as its managing editor.

The dislocations resulting from the abrupt change in management of the JOURNAL made Dr. Monahan's work difficult but he vigorously attacked the problem and made such changes as seemed necessary in the light of the altered philosophy of the State Society. He and Dr. Nahum devoted much thought and effort to continuing the high standard of excellence originated and maintained by Dr. Weld.

However, the demands of practice and the distance to and from New Haven, made it impossible for Dr. Monahan to continue as managing editor and he resigned his office, effective October 31, 1958.

Dr. Denis S. O'Connor, of New Haven, was appointed managing editor of the JOURNAL by the council on November 1, 1958, to complete Dr. Monahan's unexpired term.

The most urgent problem which had to be faced was that of providing clerical assistance for Mrs. Vivian Feriola who, because of the heavily increased workload prevailing for some time in the JOURNAL office, had assumed many additional responsibilities connected with publication of the JOURNAL. Mrs. Feriola has met the change in executive supervision with commendable cooperation and loyalty to the maintenance of high standards for the JOURNAL.

Miss Teresa Carney was obtained as Mrs. Feriola's assistant at the beginning of January, 1959, and has made possible a better organization to insure meeting publishing deadlines. We hope in the future it will improve our contacts with sources of scientific papers and news of interest to members of the Society and also provide continuity in the operation of the JOURNAL office.

The volume of scientific material during the past year has not been sufficient to permit the best selection of material for publication and it is the desire of the literary

editor that members of the Society make every effort to obtain scientific papers for JOURNAL publication. Steps have been taken to improve contacts with news sources so that all information of value to physicians will be available for publication.

It is most important that information pertaining to the affairs of the State Society be made available to its members accurately and promptly. I believe that the volume of material emanating from the secretary's office is an indication of the excellent job being done by Dr. William Richards and it is hoped that members will keep informed of the activities of the Council and the House of Delegates by reading this material each month in the JOURNAL.

Now that the socio-economic and political aspects of medicine are being recognized for their importance to the welfare of medical practitioners more articles in this field will be sought. The reorganization in the American Medical Association and the increasing recognition of the opinions of its members in formulating policy will call for the dissemination of more information to the members of this Society as a basis for intelligent opinions concerning matters of vital concern to them.

The time between the deadline for submission of material for any issue and the actual delivery of the issue is so great that frequently information which should be made available immediately to members is often delayed. For this reason, the Society may have to seriously consider the use of a newsletter to supplement the JOURNAL.

The increase in the amount of printed material in recent issues is reflected in the increased cost of each issue. This increase in printing costs may be expected to continue and even increase.

No provision was made in the present budget for the salary of additional office help which was absolutely necessary and long over due.

To help meet the increasing cost of the JOURNAL every effort is being made to increase the income from advertising which is our principal source of revenue.

At this time, I want to express my appreciation to Dr. Louis Nahum, Chairman of the Editorial Board and to Mrs. Vivian Feriola, our Office Manager, for her efficiency without which the high quality of the JOURNAL could not be maintained and for her loyal service which has made the smooth functioning of the JOURNAL office possible.

Respectfully submitted,
Denis S. O'Connor

REPORT OF THE EXECUTIVE SECRETARY

One year ago, the Society experienced a great renaissance of interest in socio-economic matters—a belated realization that all was not well with the position of the Connecticut doctor in a rapidly changing social atmosphere. There developed an acute awareness among the members that their

characteristic and deep-seated apathy had permitted their representatives to pursue a course of action which, however well-intentioned, had placed them in a most unenviable and embarrassing position with respect to the purveyors of medical care plans and especially with respect to public opinion.

As a consequence of this renewal of interest in their own affairs, physicians joined together to protest against a situation which, for the most part, they deeply *sensed* rather than completely *understood*. Following the traditional thinking pattern of so many generations of their medical forebears, they knew what they were *against*, even if they were not entirely sure what they were *for*. Attendant to this upheaval within our ranks, facts were often lacking but aroused interest and deep concern were not. Personalities became inextricably bound to controversial issues and differences in basic philosophy were expressed through political action.

On this account, for perhaps the first time in the contemporary history of the Society, nominations for various offices and committee posts were made from the floor, and a number of men elected to serve in positions of responsibility for which they had little to qualify them in terms of administrative background or executive experience. It was under these circumstances, then, that the Executive Secretary was chosen on April 29, 1958.

In the first hours immediately following election, I must confess to having enjoyed a few brief moments of self-indulgence—of giving in to the universal human weakness which allows the ego to be flattered—of even taking smug satisfaction in having been a supporter of the winning team. But I can honestly report to you that those moments were of short duration and had been completely dissipated by the very next day.

There was a sudden and somewhat frightening realization that to properly do this job, a tremendous amount of work would be required and that for the first time in many years, this undertaking would have to be attempted on a part-time basis. This aspect of having been elected has presented a real challenge and I assure you that I have tried my best to meet it.

A second aspect of assuming this office has fortunately required no previous training or experience. To me, it goes without saying that all such positions of trust carry with them a moral obligation to give equal representation to every member of the Society and to every point of view, without regard to which side of the fence any member might be on before or during a controversy, or might choose to remain on thereafter. In whatever other respects I may have failed in discharging the duties of the Executive Secretary, I earnestly hope that no member or segment of the Society has had the slightest reason to believe that I have failed in this, the most important and fundamental responsibility of holding office.

It is not to be implied, however, that at meetings of the Council I have not raised my voice from time to time in an effort to further the principles in which I personally believe, or have not exercised the privilege of casting my vote in support of those principles in which I have reason to think the majority of physicians also believe. I feel there has been no area of conflict between these two related functions since, to my mind, each is entirely independent of the other.

It is my considered opinion that this concept has been shared by all the officers in whose collective hands was placed the task of promoting the proper interests of Connecticut physicians a year ago. This is said with full recognition of the fact that these several men come from different parts of the state and from different walks of life; that, as individuals, they engage in a variety of professional activities; and that, in their personal opinions, they may not necessarily see eye to eye on a number of matters which relate to the practice of medicine.

Such progress as has been made this year toward the betterment of the conditions under which we must all pursue our profession, has been achieved largely through persuasion and the mutual exchanging of ideas rather than through stubborn insistence on matters of minor detail. If the latter course had been followed, it might well have resulted in an unproductive stalemate, to the benefit of no one.

With respect to the Council, I wish to report to you that it has indeed been a reassuring experience to have served as a member of an executive body whose business has been transacted in an atmosphere which has permitted full expression of individual opinion, which has encouraged free and unrestricted debate on each and every issue, and which has fostered willing acceptance and support of the decisions of the majority, without rancor or personal enmity. In considering many matters of a highly controversial nature, it is to the everlasting credit of the Council, and especially of its able Chairman, that this atmosphere has been uniformly sustained all during these trying months.

I have no desire to make this report unduly long or complicated. However, there are several matters of some importance which I feel should properly be brought to your attention. For example, I have been asked many times whether or not I consider that the post of Executive Secretary can be satisfactorily discharged on a part-time basis. Even with the loyal and efficient assistance of the well-organized staff at St. Ronan Street, I do not believe that it can. There are too many areas of administration, of liaison and of committee functions which must necessarily be neglected because of lack of time and because of the impropriety of absenting one's self from practice too often and for too long. One job or the other must ultimately suffer under these conditions, and responsibility to one's patients must always be given priority. In the long run, this type of arrangement will work to the disadvantage of the Society.

One of the several omissions of duty which I have been forced to make is that of attendance at meetings of the county medical associations as a representative of the State Society. I have been able to attend a total of only four meetings, over and above those of the New Haven Association, in which I hold membership. I would therefore like to take this opportunity to publicly apologize to the officers and delegates of the New London, Middlesex and Windham County Medical Associations for my inability to attend either their semi-annual or annual meetings. I apologize not because they particularly required my presence in order to conduct their business but because I feel sure I have missed a great deal in the way of pleasant company as well as interesting and informative proceedings. I ask you to communicate this apology to your members.

A second matter of great concern is the persistent reluctance or refusal of all too many members of the Society to

serve it in any capacity whatever. I feel it is the duty of every delegate assembled here to earnestly try to convince his colleagues on the home front that this apathy—this casual attitude of disinterest in their own affairs—has had disastrous and weakening effects on the structure of the Society in the past, and will do further irreparable damage if it be persisted in. We must not let ourselves believe—all evidence to the contrary—that if our members could somehow be made aware of the danger inherent to this attitude, they would deliberately choose to ignore it. We must give the Society back to the members, so to speak, since in the final analysis, it is theirs to do with as they will.

A third topic worthy of mention is the activities of our numerous committees. The majority of the members who serve on these committees are hard and devoted workers. At their many meetings, they more often than not develop material and ideas which are of the utmost importance and interest to all physicians. Unfortunately, the product of their labors all too frequently ends up in the minutes of their meetings which are mimeographed and distributed back to themselves or can only be briefly summarized in the published annual reports. With a few exceptions, the Secretary has been remiss in his duty to get this material to the entire membership through the Journal or by other means. Again, the limitations of time have been partly responsible, but there is a crying need for effective coordination of the work of our committees, perhaps by grouping them into councils as the AMA has recently done, in order that the end results of their time and efforts may be promptly made known to the many rather than the few. Such a system might also tend to prevent reduplication of work and the conflict of interests which occasionally occur at present.

A committee with which I have worked quite closely is that concerned with state legislation. Several hundreds of bills had to be studied to screen out those of specific interest to the profession, so that those which contribute to the cause of good medical care may be given support and those which are not for the public good or which tend to encroach on the freedom of practice may be opposed.

In the published report of the Committee on State Legislation, the Chairman has made a number of forceful comments concerning the Society's legislative program and has stressed the need for active participation in it by all members. It is very apparent to the Secretary that most physicians consider this to be an extremely important function of the Society yet, once again, I must report that few have demonstrated a willingness to take part. It is not my purpose to embarrass anyone, but it is a fact that out of eleven members designated to conduct the legislative program, an average of only three found it possible to attend committee meetings. A commendable attempt was made to stimulate a program of activity at the county level but there have been only a few reports to suggest that this is being widely implemented.

On the credit side, recognition must be given to the excellent work being done by Dr. Mills, who took over the committee chairmanship in mid-stream; to Drs. Russell, Feeney, Gallivan and others, who volunteered to represent the Society on many occasions at legislative hearings; to our

old standby's, Dr. Osborn and Dr. Burgdorf, who gave yeoman service without having to be asked; and last, but by no means least, to Mrs. Lindquist and the office staff for their major contribution to the legislative effort.

I am in complete agreement with those who feel that we require a lobbyist or a coordinator for this activity in the future, but in addition, I believe the Council must give serious thought to a revision of the Committee on State Legislation, perhaps by the substitution or inclusion of representatives of other committees whose special knowledge would expedite policy decisions on bills of a technical nature and thereby increase the efficiency and effectiveness of this most important program. Lobbyist or not, only doctors can evaluate proposals pertaining to medical care and health, and only doctors who have a full understanding of these matters can speak with telling effect in support of, or in opposition to them.

There are many other matters which might be profitably touched upon, but the agenda is long and I have no desire to monopolize the proceedings. In conclusion, therefore, I wish to express my sincere thanks to the House of Delegates for having accorded me this opportunity to serve the Society. I find myself a little tired, mentally as well as physically, for between the demands of practice and those of the Secretary's office, there has been little time for rest and relaxation. But the experience has nevertheless been a most stimulating one—replete with alternating periods of elation and despair—and I consider myself most fortunate to have been granted a chance to participate in the affairs of my chosen profession.

I think you will probably sense that this report is not meant to be of the variety which, in essence, merely supports motherhood and opposes sin. It represents an attempt to inform the House of Delegates and all members of the Society as to how things have gone in the Secretary's office during this crucial year and to make a few observations based on one year of experience. It has necessarily been written from the standpoint of one man on the inside, looking out, but you are requested to consider it from the viewpoint of several thousand men and women on the outside, looking in. I hope you may find it a report worthy of your acceptance.

WILLIAM R. RICHARDS

REPORT OF THE CHAIRMAN OF THE COUNCIL

Once again it is my pleasure to report on the activities of the Council—activities which are of vital interest to the 3,239 members of the Connecticut State Medical Society. It is a distinguished honor to be Chairman of a group of physicians, who despite the demands of family responsibilities and active medical practice so unselfishly devote themselves to the problems common to all practitioners of the State of Connecticut. After one year as Chairman of this group of dedicated physicians, I am convinced that the guiding principle in all their deliberations is the promotion of those measures which advance Medical Science in a free society, seeing to it that neither the interest of the public nor the interest of the practitioners of medicine is neglected. If we remain faithful to this principle, it should surprise

no one that from such unity of purpose there will follow unity of action.

The past year has been a very busy one for your Council. Organizational need, joint discussions with our Blue Shield plan and proposed legislation had to be faced and considered concurrently. In any productive organization there must be a pendulum which keeps all the parts moving harmoniously. That focal point in our Society is the office of executive secretary. During the past year our Executive Secretary, in spite of being engaged on a part time basis, and regardless of the time divested from his personal and practice requirements, has conducted the affairs of the Society in most laudatory manner. In fact, to him we stand in debt. We are most fortunate that he has agreed to accept the position of General Manager on a full time basis, in accord with the terms of the contract presented for your approval today. The contract was arrived at only after lengthy consideration by the Council; for the present, the office of executive secretary must remain as described in our by-laws but at the Semi Annual Meeting of the House of Delegates, the Council will present a by-law change outlining the office of secretary of the Society as required by our charter.

Much needed improvement in reestablishing the proper working relationship between the State Society and its sponsored Blue Shield Plan has been accomplished. While most of you were enjoying last summer and fall the members of your Council were compelled to forego those enjoyments so that this most important controversy could be resolved. A liaison committee has been established between the Board of Directors of CMS and the Council of the Connecticut State Medical Society, a new Medical Advisory Board replacing the former Professional Policy Committee has been provided for—the board is now enlarged to allow for wider representation of various medical specialties—the Board of Directors of CMS has been enlarged maintaining however, the equal representation of medical and lay personnel and terms of office have been established for these officers. Within the past week the amended by-laws of CMS have been sent to all participating physicians. In view of the sponsorship of CMS by the State Medical Society it is my conviction that these by-laws should be sent to every physician member of the Connecticut State Medical Society and at the next meeting of the liaison committee I shall make this representation to the Board of CMS.

The Medical Policy of CMS must be that proposed by the Medical Society. You are in receipt of a resolution approved by the Council outlining a method of obtaining direction on medical policy from the medical profession which indicate the method by which the Connecticut State Medical Society may expeditiously act upon a request by the Board of Directors of CMS for the approval of any proposed new contract, or of proposed changes in an existing contract. In the past, the medical policies of CMS have not always been arrived at after full consultation with the Society. Too frequently the Society has been placed in the unhappy position of being forced to reject policy, the formulation of which, the Society has not had an opportunity to express the views of the membership. It is the hope of the Council that in the future our representatives on CMS Boards and Committees shall receive from the Society the

medical policy to be followed. It is impractical for the Society to send representation to CMS without this guidance. It is essential, that without further delay, relative value studies be initiated by the State Society and its component County Societies and further, that an opinion survey be carried out among the members of the Connecticut State Medical Society for the purpose of establishing positive medical policies to aid any and all third party agencies in the development of fair and equitable plans for providing prepayment for physicians services. The Council meeting as recently as April 22, 1959, approved this resolution and the method of obtaining the thinking of the membership. It is presented here today for your consideration and action. At the same Meeting of the Council a film titled "THE STORY OF CMS" was reviewed. There was general agreement that a number of apparent inaccuracies were therein contained and the Council voted to request of CMS that a printed copy of the script be made available so that the Council may review the same and provide the Board of Director of CMS with a considered opinion of the project.

The thoughts expressed in the statement accompanying the resolution on the opinion survey so fully express the viewpoint of the physician and the Council wishing the most widespread distribution of these remarks, has voted that Dr. Richards, who composed the statement, read it before this House of Delegates Meeting. It is urgent that the Society take every measure available to educate its membership in the area of third party agreements. There are too many physicians who to date have not become informed on voluntary insurance as they should be in view of the widespread interest of their patients in this method of budgeting toward possible medical care needs. The principles adopted by this House of Delegates ten years ago which led to the establishment of CMS should be reviewed. It is totally unjust for a materialistic society to demand of the medical profession a standard of idealism or altruism which is completely ignored by that same materialistic society when the physician seeks to provide for his own housing needs, the educational need of his family, the high rental costs of office space, office personnel and equipment. Few in number are the patients who are conscious of the fixed costs involved before a physician daily turns the key to open his office so he may attend his patients' needs. Good medical care is expensive because the public we serve expects only the best. However, the public abuse of hospital and medical care insurance is not helping to keep these costs from rising and it is most unfair to point the finger at the physician because the public insists on over utilization of basically sound means of providing for essential medical care. Unfortunately the physician is kept so busy attending his patients he just does not have the time to answer much such criticism. But let the public beware lest by listening to the quacks in medical economics, they do not lose the best medical care ever made available to any society in the course of human history.

I wish to direct your attention to the many fine committee reports in the agenda, especially the report of Dr. Clifford Mills, on State Legislation. The various legislative proposals pertaining to medical practice never diminish from year to year. It is the responsibility of each physician to see to it that his representative in the General Assembly

is informed on all important medical legislation. Your Society could engage the most capable legislative agents but I seriously doubt the effectiveness of legislative agents unless each physician informs his representative on proposed medical legislation. The County Medical Societies could do a much needed educational and communication program at the grass roots level in this particular sphere of essential activity.

I would direct your attention to the report of the Managing Editor of The Journal, Dr. Denis O'Connor, who is doing a remarkable job together with Dr. Nahum and the Editorial Board in producing an easily readable and informative journal for the members.

There are many other activities of your Council but in the interest of time I must refer you to the published reports in the Journal.

In closing allow me to publicly acknowledge the ever faithful services of Mrs. Josephine Lindquist, Mr. Jim Birch, and the entire staff of the office at 160 St. Ronan Street. When you have the time and opportunity drop in at the office and give us the benefit of your thoughts on how best we may serve the membership.

THOMAS M. FEENEY

REPORT OF THE PRESIDENT

During the past year many issues of great concern to the Doctors of the State have presented themselves.

The Medicare program has been altered; bills coming before the State Legislature have caused concern; arrangement for a full-time secretary or general manager of the State Society is under way; changes in the Journal and its staff have been formulated; concern over poor attendance of the Clinical Congress is manifest; changes recently made by the State Welfare Commission regarding issuance of new prescription forms for Welfare patients have caused adverse comments at County level. There are many others that will be covered in the report of Doctor Feeney, Chairman of the Council.

The outstanding event of the year was the controversy with CMS regarding policy as to by-laws, physician members of the Board of Directors, the consideration of an extended coverage plan, the lack of adequate liaison with the State Society, and others.

Many meetings of the liaison committees of both organizations were held and many meetings of the Council, even a special meeting on a Sunday afternoon in August, took place.

With mediators of National Blue Shield being brought in for advice to both organizations a relatively amicable solution to their problems was effected.

The present relations between the Council of the State Society and CMS are, in my opinion, reasonably amicable.

I wish to express my appreciation to the many committees of the Society, to the Chairman of the Council and all the Councillors and State Officers for their sacrifice of personal time to attend meetings so that the opinions of all could be correlated for the betterment of the Doctor and the public he serves.

WALTER I. RUSSELL

REPORT OF THE COMMITTEE ON STATEWIDE BLOOD BANK MARCH 1, 1959

Corrected as of April 28, 1959

MEMBERSHIP (April 29, 1958)

John E. Thayer, Hartford, Chairman
Roy N. Barnett, Norwalk
Henry N. Blansfield, Danbury
Joseph O. Collins, Waterbury
Theodore S. Evans, New Haven
Arthur M. Ginsler, Bridgeport
Frederick B. Hartman, New London
C. Henry Huvelle, Torrington
Rolf E. Katzenstein, Meriden
Ralph E. Kendall, Hartford
Edward Martin, New Britain
Christie E. McLeod, Middletown
Sawyer E. Medbury, Willimantic
Clair Rankin, Hartford
Paul D. Rosahn, New Britain
Victor G. H. Wallace, Hartford, Secretary
Levin L. Waters, New Haven, (resigned 1958)
Ira V. Hiscock, New Haven, (Associate Member)

PURPOSE

"The purpose of this committee is to promote the development of a statewide blood bank operating in the interests of the people and the medical profession. The committee is authorized, in the name of the Society, to co-operate with responsible agencies such as the American Red Cross, the State Department of Health, in prescribing professional policies of the operation of a blood bank."

REPORT

1. There are at present only two statewide blood bank programs in the United States, our own and the Vermont-New Hampshire blood bank. The National Red Cross, because of limited participation in other sections of the country, limits the amount of money allotted each year to blood banking more and more. At present our blood bank has not only been able to make up any deficit in the cost of operation of a blood bank but has also been able to establish enough of a fund to insure against loss of all such financial support but to also start an independent unit with its own buildings, trucking, equipment and supplies, and to pay the salaries of the personnel necessary for the collection, processing and distribution of blood in the state.

2. The demands on any blood bank would be very severe in any civilian disaster. Transportation and collection problems would multiply and location of a central blood bank would complicate or simplify the logistics of reply to such disasters. The lease on the present location of the State blood bank will expire shortly.

3. The location in Hartford of the present blood bank was dictated by several factors. The chief one being due to the autonomous character of the local Red Cross chapters. This led to the necessity of choosing one chapter to administer the funds of the National Red Cross, there being no statewide organization, and the Hartford chapter was so chosen. The Hartford chapter, too, has to move and is planning a new building or expansion of another building to accommodate its own needs and the needs of a statewide blood bank. Your committee has seen these plans and its representatives have inspected the proposed property. The

committee considers the proposed allotment of operating space, and most particularly, lack of parking space for vehicles of the blood bank and its personnel quite inadequate. Its location is in the center of extremely heavy traffic flow and will further complicate its present transportation problems.

Since the submission of this report, further information has become available and other changes in the present program have taken place.

The Hartford Chapter, American Red Cross has moved to 100 Farmington Avenue, Hartford. They have made provision to house the State Blood Bank on the first floor of that building. The actual movement of the blood bank has not as yet taken place.

Your committee has been assured that the National Red Cross will continue to support blood banking in this state and that it should, in the near future, increase its financial help. There are also plans at present to increase its facilities for the gathering of blood as the present equipment is being used to top capacity. The present plans include the addition of one or two more blood mobile units.

Dr. Victor G. H. Wallace has had to resign from the directorship of the Connecticut Regional Blood Program because of ill health. The search for a replacement for Dr. Wallace has started. As expected, this has been difficult and is complicated by the fact that the appointment must be approved by the National Red Cross, (after all they pay his salary), and the Hartford Chapter acting as their agent with the Connecticut Regional Blood Committee of the Connecticut Regional Blood Program. This latter committee is made up of representatives of the individual American Red Cross Chapters of the State. We are still looking for a suitable physician to take charge of this vital program.

The consideration of the above factors caused your committee to meet again on March 26 to review its previous findings.

It was decided to accept the change in location of the blood bank. It was also felt that the State Medical Society should make provision for a smooth transition of the State Blood Bank from one control to another if at any time this should be forced upon us. In order to prevent confusion of a hasty transfer or an ill-conceived transfer which would so endanger the present program that it would collapse and that individual hospital blood banks would have to operate independently and that most of the gains in safe blood banking, possible only with such a large organization, would be lost to the physicians and the people of the state.

7. The problem of utilization of blood in hospitals is still increasing and will continue to increase with the progress of medicine. Supply of blood is always less than demands. The specific answers to current problems are always available to you from the copies of the minutes of this committee submitted to our society.

8. The Connecticut Regional Blood Program recruitment is improving in general, thanks to the members of the American Red Cross who donate time and their monies to this recruitment. Such improvement would be impossible without the co-operation of local Red Cross Chapters, one with another through their unique statewide committee. This committee wishes this society to thank the Connecticut Regional Blood Program and the individual American Red

Cross Chapters for their efforts and to wish them to continue their co-operation and efforts for the success of the blood program in this State for the people of this State.

We wish to add to paragraph 9 of the printed report—

9. *This committee also wishes this society to especially commend Victor G. H. Wallace for his supervision and operation of the statewide blood bank. It also wishes this society to thank Victor G. H. Wallace for his service to this committee, this society, and the people of this state during his directorship of the statewide blood bank. He has established excellent rapport between the recruitment activities, the individual hospital blood banks, and your committee. His six years of service to blood banking in the State have been marked by continuing improvement and plans for further development of blood banking for you and your patients.*

The beginning of open heart surgery in Connecticut has raised new and unexpected problems in donor recruitment. Actual surgery has started in New Haven and will have started in Hartford by the time this report is presented. The exact impact on the statewide recruitment of blood is not, of course, yet known. Dr. Bernard Mann, New Haven and Dr. Ronald Beckett, Hartford have been, as you know from last year's report, to study this problem. There will have been a special meeting in New Haven to which representatives of the recruitment chairman of the various Red Cross chapters, the Connecticut Regional Blood Program, and the directors of blood banks in the state have been invited to acquaint them with the special problems involved and to attempt to get the necessary donors without interfering with the present recruitment program. To prevent failure of the statewide program will necessitate the active co-operation with the Red Cross of all members of this society in obtaining donors who are not at present giving blood to any program.

Respectfully submitted,

JOHN E. THAYER

REPORT OF THE COMMITTEE ON POSTGRADUATE EDUCATION

Arthur Ebbert, Jr., Chairman

Gray Carter	Herbert Levine
Malcolm M. Ellison	Howard Levine
Martin E. Gordon	Marvin Lillian
William J. Lahey	Robert M. Lowman
John C. Leonard	Oliver J. Purnell

A. Rocke Robertson

The committee has continued to focus its attention on the annual Clinical Congress. Early in 1958 the committee exhaustively but unsuccessfully explored possibilities of holding the Clinical Congress in Fairfield County; no satisfactory location could be found. Therefore, it was decided to have the sessions at the Statler Hotel in Hartford. Because of diminishing attendance over the past five years, a one-day program, instead of the usual two, was planned.

The 33rd Connecticut Clinical Congress was held in Hartford on Wednesday, November 5, 1958. Total registration was 284 (234 members; 50 non-members and guests). It was felt that this registration compared favorably with that of the 1957 two-day meeting and that it was desirable to

continue this postgraduate program. Therefore, the committee recommended that a similar one-day Clinical Congress be held in 1959 and, because of possible advantages in moving the site, that this year's Congress be held in New Haven. These recommendations were accepted by the Council, and the 34th Connecticut Clinical Congress will be held at the Yale-New Haven Medical Center on Wednesday, September 30.

The committee has discussed additional activities whereby it may be of further service to the physicians of Connecticut. There appears to be a growing interest in postgraduate medical programs in the community hospitals throughout the state. A symposium on problems of graduate and postgraduate education for directors of medical education and interested members of hospital staffs is currently under consideration.

Respectfully submitted,
Arthur Ebbert, Jr.

REPORT OF THE COMMITTEE ON HOSPITALS

George H. Gildersleeve, Chairman

Dana L. Blanchard	Vincent A. Gorman
Robert F. Buckman	Bernard F. Mann
Clyde L. Deming	Nathaniel Selleck, Jr.
William G. H. Dobbs	Michael S. Shea
Isadore H. Friedberg	Leopold M. Trifari
Isadore S. Goldberg	Edward J. Zebrowski

The Committee on Hospitals held seven meetings during the past year. Four of these meetings were joint conferences with the Council on Professional Practice of the Connecticut Hospital Association.

On October 13, 1957, the Council of the Connecticut State Medical Society asked the Joint Conference to organize a sub-committee of the group to advise the Connecticut State Department of Health on the Poison Information Center. The following were appointed to this Medical Advisory Committee: Leopold Trifari, M.D., New Haven, chairman; Edward T. Wakeman, M.D., New Haven; Angelo Mastrangelo, Jr., M.D., Stamford; Clifford Joseph, M.D., Torrington; Nicholas J. Giarmann, Ph.D., Yale University School of Medicine, New Haven; Mr. Richard Judd, Grace-New Haven Community Hospital, New Haven. The Committee is active and submits the following report.

Respectfully submitted,
George H. Gildersleeve

REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

John F. Kilgus, Jr., Chairman

Fred A. Anderson	William Lee
Preston N. Barton	Daniel F. Levy
Robert W. Butler	A. Duncan MacDougall
Norton Canfield	George F. Martelon
Roland Z. Carignan	J. Wister Meigs
Morris A. Granoff	Jacob A. Saltzman
David C. Harvey	Nicholas Samponaro
Richard J. Hinchey	William M. Stahl, Jr.
J. Howard Johnston	Joseph J. Stapor
Thomas F. V. LaPorte	Ellwood C. Weise

C. Frederick Yeager

The committee has three regular meetings a year, in May, October, and March. In the interval between these meetings, the work of the committee is carried on by an executive committee and various subcommittees which meet at the call of the chairman. One of the pleasant tasks of the committee each year is to recommend to the Council a physician to be nominated by the Governor's Committee on Employment of the Physically Handicapped for the annual award to a physician rendering "outstanding service in the employment of the handicapped." It was the committee's pleasure this year to nominate Doctor John C. Allen, physiatrist of the Hartford Hospital.

As this report is being written, the committee is deeply engrossed in the task of reviewing many bills being presented to the Legislature which in one way or another touch upon the practice of industrial medicine. This, of course, includes the many bills concerned with the various revisions of the Workmen's Compensation Law. In past years the committee has been very successful in pointing out fallacies in this proposed legislation and giving the Medical Society's Committee on Legislation ammunition with which to fight undesirable legislation.

In 1953 the Committee on Industrial Health wrote a "Code of Ethics Relating to Occupational Medicine" which was approved by the Council and the House of Delegates. A year later the American Medical Association through its Council on Industrial Health published "Guiding Principles of Occupational Medicine." A member of our local committee served on the national committee which wrote these guiding principles. They were patterned very closely after the Connecticut Code of Ethics and in fact numerous statements copied word for word from our code. More recently, in 1957, the Council on Industrial Health of the American Medical Association presented and had approved by the AMA House of Delegates the "Scope, Objectives and Functions of Occupational Health Programs." As there was some evidence of a change of philosophy concerning the practice of occupational medicine evidenced in this new publication, it seemed wise to revise the Connecticut State Medical Society's old "code of ethics relating to occupational medicine" and bring it more nearly into conformity with the "Scope, Objectives and Functions of Occupational Health Programs" as currently conceived by the American Medical Association. This has been done with much thought and concern and with the participation of all the members of the Committee on Industrial Health. *This new "Guiding Principles Relating to the Practice of Occupational Medicine" has been presented to the Council of the Connecticut State Medical Society and is now presented as a portion of this annual report for the approval of the House of Delegates.*

The chairman wishes to take advantage of this opportunity to thank all the members of the committee for their excellent cooperation and support and also to express his appreciation for the assistance rendered by Doctor Richards, his staff, and by the Council.

Respectfully submitted,
John F. Kilgus, Jr.

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Connecticut Physicians' Art Association

Although the Art Exhibit got off to a late start and we missed the deadline for the generous advertisements in the early journals this year, the physicians and their families contributed one of the finest exhibitions in the history of the show. There were sixty exhibits by professionals, amateurs and beginners in Oil, Water Color, Pastel, Charcoal, Tempera, Photography, Ceramics and Sculpture. The exhibit was judged by Mr. Herbert Gute, Mrs. Ethel Stauffer and Mr. Joel Anderson.

A list of prizes in each medium follows:

Ceramics: "Musician," by Mrs. Saul B. Meltzer, Bridgeport. Sculpture (1): "Mary Chrissy," by Hazel Holloway Rentsch, Derby; (2): "Primitive Mask," (Clay), by Barbara Brown, Groton. Children (1): Tempera—"Perfect Powder," by Carolyn Bolt, No. 41, Willimantic; (2): Watercolor—"Color Moods," by Barbara Brown, No. 39, Groton. Black & White: (1): Dry Point—"The Old Light," by Herbert Thoms, M.D., New Haven; (2): Charcoal—"Moment in Two Lives," by Murray Z. Rosenberg, M.D., Storrs. Portrait—Oil: (1): "Eveningtide," by Mrs. Garland Weidner, Waterbury; (2): "H. J. Corbett, M.D.," by John M. Freiheit, M.D., Waterbury. Oil—Professional: (1): "Trail Ridge," by M. Rosenthal, W. Hartford; (2): "Clouds," by Saxton Burr, M.D., Old Lyme. Water Color—Pastels: (1): "Sammy," by Mrs. N. A. Marinaro, Newington; (2): "Birches," by Saxton Burr, M.D., Old Lyme; Honorable Mention: "Pink Flowers," by Dorothy C. Tutles, West Hartford. Oil—Amateur: (1) (tie): "Mountain Stream," by Richard M. Starr, M.D., New London, and "Old Wharf," by Stephen Rosenthal (age 18), W. Hartford; (2) "The Organ Grinder," by Edward E. Williams, M.D., Naugatuck; Honorable Mention: "Block Island," by Mrs. Saul B. Meltzer, Bridgeport. Oil—Beginners: (1) "Harvest Table," by Albert Gosselin, M.D., Norwich; (2): "Country Lane," by Laura Gosselin, Norwich; Honorable Mention: "Grapes," by Dorothy C. Tuties, W. Hartford. Photography: (1) "Photograph of Iron Grill," by Karen Rosenthal, W. Hartford.

Unfortunately, the funds of the Association do not allow the presentation of elaborate prizes and Blue Ribbons must suffice. However, in keeping with the rules of the American Physicians Art Association, those physicians, who first win blue or red ribbons in each division, will have the hanging fee and shipping fee paid to send their winning entries to the competition in the American Physicians Art Show at the Convention Hall in Atlantic City in June.

The winners so entitled are: (1) Dr. Herbert Thoms for "The Old Light," Dry Point; (2) Dr. Saxton Burr for "Clouds," Oil; (3) Dr. Richard Starr for "Mountain Stream," Oil; (4) Dr. Edward Williams for "The Organ Grinder," Oil; and (5) Dr. Albert Gosselin for "Harvest Table," Oil.

The winners have been so notified and it is hoped they will all avail themselves of the opportunity to exhibit their arts in Atlantic City, where there are trophies one can really hang his hat on.

Credit must be given again to our sponsors, The Women's Auxiliary, which contributed a substantial sum of \$50.00 to our small but ample budget, and especially to Mrs. Orvin Hess, who served as chairman after we had given up hope of

finding one and to Mrs. Harriet Apuzzo and Mrs. Saul Meltzer of Bridgeport, who spent a Sunday afternoon helping arrange the exhibit.

The Art Association is still alive and active and we hope many of those, who formerly exhibited but received scant notice to send in their work, will remember that next year at the State Meeting there will be another show. Newcomers are also invited. One exhibitor who hesitated to send in her painting this year was awarded a first prize—(see picture). What's tops is up to the judges—if we could find a loquacious amateur who could really argue with them—perhaps one day we'd sneak in a ringer. But even the judges admitted "The Show Was Good."

JOHN M. FREIHEIT, *President.*

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Physicians use great care in administering any drug or medical preparation which may cause an unfavorable side reaction in a patient, and this is a good thing both from a medical and legal standpoint.

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These are precautions a physician should take when prescribing Antabuse for a patient:

See that the patient is accompanied by a responsible member of his family or by a reliable friend.

Make sure the patient is sober at the time of consultation.

Carefully explain how much Antabuse should be taken and how often.

Tell him what reactions will occur if alcohol in beverage or food form is ingested.

Have the patient carry a card containing a statement that he is under Antabuse therapy. The card should indicate the name and the home and office phone numbers of the physician.

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Obituary

Nathaniel B. Selleck, M.D.
1898-1959



On April 21, 1959 the community of Danbury was shocked and saddened to receive the news of the sudden death of Dr. Nathaniel B. Selleck.

After thirty-two years in general practice in this city, "Nate" suffered a relatively mild attack of coronary thrombosis in June of 1957. He very wisely made the decision to retire and to that end moved to his new home on Paradise Island, St. Petersburg, Florida, where his unexpected death occurred from a second attack of coronary thrombosis.

Dr. Selleck was born in Danbury on September 19, 1898, and attended public and private grade schools in Danbury. He completed his premedical work at Columbia University and then went to the Long Island College of Medicine, Brooklyn, where he received his degree in medicine in 1924. Following an interne-ship at St. Mary's Hospital, Brooklyn, he entered general practice in Danbury. Like his father before him, he soon built up a large practice of loyal and devoted patients. He was particularly interested in obstetrics, and during his professional career delivered some three thousand babies. He was attending physician at Danbury Hospital, and served with distinction as chief of obstetrics from 1952 to 1957. He also served as President of The Fairfield County Medical Association from 1955-56. He was a member of the American Medical Association, of the Connecticut State Medical Society, and of the Danbury Medical Society.

The story of Nate Selleck would certainly not be complete without mention of his interests outside the practice of medicine. He was never happier than when "wetting a line" for salmon in the Miramichi River in Canada or when fishing for big "kings" in the Gulf of Mexico. When the "honkers" came down from Canada in the fall, Nate and several companions would be off to some hunting camp in the Carolinas and would usually come back with the limit. Another avocation which occupied much of his spare time was the study of finance and investment. He was a very keen student of this subject and a wise and astute investor.

He leaves his wife Alma, and three children, Jo Ann, David, and Cynthia. He also leaves two sons by a former marriage, Robert Selleck of Bridgeport, and Dr. Nathaniel Selleck, Jr., of Danbury, who is the third Nathaniel Selleck to practice medicine in Danbury.

JOHN D. BOOTH, M.D.

In Memoriam

Barber, Walter L., Jr.—Waterbury; New York University School of Medicine, 1907; attending surgeon at Waterbury Hospital from 1909 until his retirement in 1948; served with the U.S. Army Medical Corps, 81st Division, in World War I; following the war, he pursued post-graduate studies in France and resumed practice in Waterbury upon his return in 1919; served as president of the medical staff at Waterbury Hospital and also as secretary and president of the Waterbury Medical Association; died at Waterbury Hospital April 10 following a long illness, aged 77.

Freedman, Barnett P.—New Haven; Yale University School of Medicine, 1920; consultant allergist at Grace-New Haven Community Hospital and practiced in New Haven for more than 20 years; prior to that, he was a resident physician at the City Hospital of New York and was associated with the Allergy Department of the Brooklyn, N. Y., Jewish Hospital; died suddenly April 14 at 62 years of age.

Rowley, Robert L.—Hartford; Yale University School of Medicine, 1903; interned in Hartford Hospital and was its visiting physician for 15 years; medical director for the Phoenix Mutual Life Insurance Company for 35 years, retiring in 1950; past president of Association of Life Insurance of Medical Directors of America; many years a member of the State Medical Examining Board; member of Board of Directors of Hartford Hospital 1928 to 1958, when he was made an honorary director; died in Hartford Hospital May 5 at 80 years of age.



The Role Of The Private Physician In The Detection Of Cancer Of The Lung

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CANCER OF THE LUNG

IN spite of our great advances in the technics in surgery, the wonderful training afforded surgeons in many of our large hospitals and cancer centers in the field of lung cancer and chest surgery, the survival rate in cancer of the lung remains a pitiful and meager five per cent. This is not the fault of the physician or surgeon, nor is the patient to blame. It is our lack of some diagnostic instrument or a new concept by us physicians to help in the early—very early—diagnosis of this malignancy.

Since we are becoming a nation of older people, a nation more industrialized with belching chimneys from manufacturing plants, more radiation, and so much more inclined to use the "suckling weed" the cigarette, we must expect a greater amount of lung cancer. All cancers are increasing because we are a nation of older people. There is one great difference in the pattern of cancer of the lung. More people 80 years old will develop cancers than those 70 years and more people 70 years will develop cancers than those of 60 years and so down the line. This is not so with cancer of the lung. The incidence of lung cancer reaches a greater increase and peak at the age of about 55 years (more or less), beyond this age there is a decrease in the incidence of bronchogenic carcinoma. There are certain theories suggested for this pattern. The one suggested by Ochsner is as good as any, and better than most. He states that this difference in behavior and incidence of lung cancer may be due to the fact that heavy smokers of many years' duration have subjected

their hearts and blood vessels to the deleterious effects of tobacco. As a consequence they are likely to develop coronary thrombosis and die before the carcinogenic effect of tobacco has a chance to exert itself.¹

In the United States in 1914 bronchogenic carcinoma in men was 0.7 per 100,000 population whereas in 1950 this disease had risen to 19 per 100,000.

The alarming increase in the incidence of cancer of the lung, more than any other cancer in the male body, is best shown by these figures. In 1920 cancer of the lung represented 1.1 per cent of all cancers in the United States, in 1930 2.2 per cent, and in 1948 8.3 per cent. Ochsner predicts that by 1970 lung cancer will represent 18 per cent of all cancers. Since men are more prone to acquire this condition than women, Ochsner states that in 1970, one of every two or three men with cancer will have cancer of the lung.²

Blades states that lung cancer is the most common visceral carcinoma in the male, and now exceeds other common malignancies roughly in the ratio of five to three.³ Despite progress toward earlier diagnosis and improved surgical treatment, the high mortality of bronchogenic carcinoma has not been significantly reduced. The over-all survival rate still remains at not more than five per cent. Ninety per cent of patients of Mayer and Roswit were inoperable, and 65 per cent had metastases when first seen.⁴

Early diagnosis of most cases of cancer of the lung depends primarily on a good x-ray examination. Thus, surveys and routine chest x-rays are important

sources of the earlier cases. The lack of symptoms and even a slight gain in weight are not incompatible with primary cancer of the lung. This is not to infer that reliability for diagnosis must be dependent upon x-ray alone. The appearance of bronchogenic carcinoma varies widely. It may mimic a tuberculosis, a pneumonia, and many other findings in the so-called "normal" lung.

Those of our patients with bronchogenic carcinoma may have no symptoms or perhaps only a slight cough. A history of a slightly blood tinged sputum must be given the same consideration as a frank hemoptysis and requires a full and complete investigation. Do not assume that the slight blood streak came from the nasopharynx or was due to a simple cough. Many times symptoms beyond the bronchial neoplasm mask the underlying cancer. We must be suspicious of pneumonias recurring in the same lung area in the same patient. If we wait for the typical weight loss, chest pain, weakness, and other typical signs in these patients then you will find that they are already beyond the curative stage. Any symptoms of bronchial obstruction no matter how slight, or a wheeze in a patient without a history of prior asthma or allergy must be thoroughly investigated.

One of my patients, a 46 year old white male, was followed by two of my chest surgeon specialists and had repeated x-ray studies and numerous bronchoscopic examinations over a three year period but not once in this three year period did the x-rays or bronchoscope reveal the carcinoma hidden in his lung. Just two months ago a small mass was seen on x-ray. This patient has incurable carcinoma of the lung. This was no fault of the physicians, the radiologists, or the bronchoscope, but the fault of the diversity of type, size, and position of the hidden mass. The patient's original complaint—cough with slight blood tinged sputum.

A patient with pain in the shoulder and neck region might be manifesting the first symptoms of extrapulmonary extension of a lesion at the apex of the lung with invasion of the region of the brachial plexus and the base of the neck. In others, the symptoms suggest a possible gastric lesion, and the lung cancer is found during the gastrointestinal fluoroscopic examination. Signs of brain tumors may be produced by metastases from a silent pulmonary carcinoma.

Following chest x-ray I would say that the next most important weapon in diagnosing lung cancer is the combination of bronchoscopy and cytology studies of exfoliated bronchial cells. I believe it is the procedure in most hospitals that wherever possible bronchoscopy material for cytologic study of the bronchial secretions are taken for examination and study.

After radiographic study and cytologic study, it is the opinion of most specialists in the field of chest diseases that exploratory thoracotomy is the next most important diagnostic step to be considered. If a definite diagnosis cannot be established and there is no medical contraindication, exploration and immediate biopsy must be considered. In this procedure the operative mortality is lower than that of exploratory laparotomy and the information gained is in many instances vital. In many patients when the thorax is opened definitive surgery can be done immediately if the frozen section or aspiration biopsy is positive for carcinoma.

I would like to emphasize that it is mandatory for the private physician to procure a chest x-ray on all patients over the age of 35 years at least once a year, and twice a year for patients over the age of 40 if they are heavy smokers.

Bronchoscopy is a must in those patients with normal x-ray findings but who have blood tinged sputum, chronic cough, and pain in the chest not referable to the heart.

We must remember that there is the so-called "silent" period between the formation of the first abnormal cell and the occurrence of the first overt sign, and that it is often during this period that much damage is wrought by metastases to adjacent structures in the chest and to near or remote organs. Sooner or later in this period changes occur in the lung or mediastinum which are capable of casting an abnormal shadow in the roentgenogram. The shadow may be as the tumor itself, or an area of atelectasis, an organizing pneumonia, or merely an area of localized emphysema. This is the period, this preclinical stage, wherein the roentgenogram can many times detect abnormalities. It is in this period where we must make greater use of x-ray examinations.

In review of many case histories we physicians find that these patients present histories of one or several attacks of acute upper respiratory infections, usually fleeting in character. These are probably the manifestations of interrupted bronchial drainage and of retained infection culminating in patchy areas of lobular pneumonitis. Usually the onset is insidious with bizarre symptoms simulating almost any type of respiratory infection.

Close observation of these patients will tend to show definitive symptoms which arise and persist almost always in this order of frequency:

Cough and expectoration which occur in about 70 per cent of all cases. Usually dry and spasmodic, later productive. Please don't attribute the patient's cough to smoking. Investigate all coughs—especially smoker's cough. You just might be missing an early carcinoma.

Pain: This is experienced sometime during the disease. Usually early, constant, and boring in quality and may interfere with sleep. Pleurisy may accompany this pain and the associated increase in pain on deep breathing may be present.

Dyspnoea: Occurs in slightly less than half of all cases. Due to bronchial obstruction and areas of emphysema.

Wheezing: May accompany the dyspnoea and is due to bronchial obstruction. Whenever dyspnoea or wheezing occur after the age of 40-45 years and persists, bronchial tumor should be suspected provided no previous or present cardiovascular or allergic factors are found.

Loss of weight and strength: These are variable and often late in the disease.

Fever: May be present at any time and may be intermittent or continuous. This is usually due to ulceration, necrosis, and secondary infection of the mass or of the concomitant pneumonitis.

Hemoptysis: This is rarely massive. Results from erosion and ulceration and occurs more often in the adenocarcinomatous or more peripheral tumors.

Pressure symptoms: These may develop by dilatation of the veins of the neck, chest, or face and with or without associated edema of these parts. This is due to encroachment of the mass in the mediastinum.

Anemia and cachexia: Usually late complications.

Pulmonary osteoarthropathy, or "clubbed fingers": May be sometimes observed in the course of slower growing masses, as in some squamous cell types. Slow-growing and time permits low-grade suppurative processes such as abscess formation and bronchiectasis to develop.

Pleural effusions are found in about 15 to 45 per cent of patients with lung carcinoma, and most often in the peripheral type tumors. Blood is present in about one-third of the cases. The aspirated fluid is of low specific gravity, low cell count and low degree of viscosity. Cancer cells may at times be demonstrated by Papanicolaou technic. The absence of acid-fast bacilli in the sediment, determined by repeat smear, culture, and guinea pig inoculations, is a great differential factor and should warn the physician to suspect carcinoma.

The physical findings are usually associated with the stage of the growth, its location and by the occurrence of sequelae. There may be limitation of motion on the affected side. Perhaps superficial adenopathy in the cervical, supraclavicular, or axillary regions. Dilatation of the superficial veins or edema may be observed in the chest, face or neck.

The percussion note is dull to flat over the growth or over areas of accompanying pneumonia or atelectasis. If emphysema is present the sound may be tympanitic. Tactile fremitus is absent to diminished over the area involved. On auscultation rales may or may not be heard, and there is absence of breath sounds over the involved area.

Modern man is exposed to a number of lung irritants, especially if he lives in a big metropolitan community where he breathes into his lungs, day after day, air which is heavily polluted with particulate matter from furnaces, chemical manufacturing plants, incinerators, and smoke from gasoline engines of trucks, automobiles, and buses. To these respiratory insults many of our patients add the smoke of at least one or two packages of cigarettes per day.

The abuse our patients, and many of our physicians, add to their lungs daily may certainly be the greatest single factor in the creation of lung cancer. Most physicians in the field of chest diseases have found that the vast majority of male patients with lung cancer have indulged in the habit of smoking, especially cigarettes, for many years. The chronicity of this irritant, added to those irritants from which the large percentage of our population cannot escape may be the one greatest single contributing factor in the increase in the occurrence of lung cancer.

Another important factor to be reckoned with is the new air pollution additive in the form of radioactivity. It is well known that normally there is a measurable amount of radioactivity in the atmosphere around us. Now with the added amounts resulting from release by the explosion of nuclear bombs more will be added to the air we breathe. The effect of this radioactivity will depend upon the nature of the blasts and the atmospheric conditions prevailing at the time of the explosion. This potential hazard has been recognized by the Atomic Energy Commission and the United States Public Health Service and other agencies. Appropriate measures for control are being devised and worked out. I wonder if we physicians have given due thought and consideration as to the reflection of this added impurity in our atmosphere and the results in 10 to 15 years hence in the numbers of added lung cancers we might find in our patients—and ourselves?

DETECTING LUNG CANCER: SUMMARY

Radiographic studies of the lungs is our number one asset in detecting lung cancer. The x-ray machine, in the hands of experienced physicians deeply interested in the EARLY diagnosis of lung cancer can very well be a precision instrument in the detection of this disease. Contrary to the adverse

opinions expressed by some scientists and a few physicians mass x-ray surveys, routine chest x-rays, pre-employment chest x-rays, and serial chest roentgenograms over a period of years may be the greatest factor in showing lung changes at the earliest possible time. In suspected cases, either because of clinical signs and symptoms with or without x-ray changes, further investigation by bronchoscope, cytology, or exploratory thoracotomy may save many lives.

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NOTICE!!!**Please Read Carefully**

As a result of burglarization of the Society building on June 7, 1959, a number of checks submitted in payment of Society or A.M.A. dues were completely or partially destroyed. All members who were identifiable from a check or dues slip have been notified of this occurrence.

Any member of the Society who submitted such dues payments during the latter part of the week ending June 6, 1959, and who does not receive a personal notification to this effect or who does not get back his properly cancelled check when expected, is asked to communicate with the membership section, Connecticut State Medical Society, 160 St. Ronan Street, New Haven, Connecticut.

The Role Of The Private Physician In The Detection Of Cancer Of The Breast

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Suspicion is our greatest diagnostic tool!

CANCER OF THE BREAST

ALL physicians are on equal par when it comes to the diagnosis of cancer of the breast. It does not matter how highly specialized a physician might be, his ability to diagnose cancer of the breast is not one bit greater than the ability of the general practitioner. General physicians and obstetrician-gynecologists have one great advantage—they see the vast majority of female patients first!

It is the duty and the role of the general physician, for these physicians see approximately 80 per cent of the patients before the surgeon does, to recognize early changes in the breasts no matter how slight these changes may be. We physicians must suspect breast cancer more and more on less and less evidence of its presence. Patients must be advised to report to their physicians the slightest symptoms referable to their breasts. It is no longer wise nor is it good judgment to "wait and see" what happens to any breast mass, especially the single solitary type.

It is the duty of the private physician to educate his female patients in the simple art of self breast examination. Most sensible women already know how. And it is the duty of the physicians to undress completely all female patients to thoroughly reveal these patients naked from the waist up when doing breast examinations.

Our greatest and only hope for an improved salvage and survival rate in the lives of females with breast lumps depends upon three main factors:

1. Constant suspicion
2. Thorough examination and complete history
3. Early diagnosis.

Carcinoma of the breast is the most common grave malignant tumor in women, and one that offers an excellent opportunity for cure by the currently available methods of treatment. In many instances failure is attributable to the malignancy and its growth. Much too often it is due to mismanagement, neglect, and misunderstanding on the part of the patient and the physician. This neglect and mismanagement by both parties is deplorable, but brings out the emphasis we must place on the importance of education in bringing about improve-

ment in the results of treatment. Most of all—the importance of early diagnosis.

The diagnosis of breast cancer, like most cancers, is quite difficult in the earliest stages when the prospect for cure is most favorable. Usually, the first detectable evidence is a painless nodule or thickening in the breast noticed by the patient or found on routine examination by the physician. Later there may be some attachment of the tumor to the deeper layers of the skin or to the pectoral fascia and a resultant dimpling, puckering, or distortion of the breast or of the nipple. More rarely, the initial sign is a discharge from the nipple or the erosion of the nipple—the well known Paget's disease. In many cases such as during pregnancy or in females with large pendulous breasts, cancer of the breast may be heralded by a diffuse swelling, with edema and a faint flush. This is the so-called inflammatory cancer of the breast. In some instances the physician might be lulled into treating this symptomatically for days or weeks before proper treatment or referral to the surgeon for consultation.

The discovery of tumors of the breast in the early stage is the most important single factor in the early diagnosis of breast cancer. The more thorough the examination the greater is the likelihood of discovery of small lesions. Here the prognosis is quite favorable. None of us can make a positive diagnosis on gross physical examination and therefore it is imperative that *any and all mass or masses in the breast must be looked upon as cancer until proven otherwise by microscopic examination by qualified pathologists*. This "guilty upon first feel" attitude of all physicians is probably the most important tool in our medical know-how in the early diagnosis of breast cancer. The very nodule any physician decides to wait and watch, is more than likely, in most instances, the cancer mass!

Immediate investigation of the lesion should consist of biopsy. Microscopic study is the only reliable basis for the final diagnosis of mammary cancer which must be differentiated from chronic puerperal mastitis, fat necrosis, duct adenoma, fibroadenoma in pregnancy or lactation, giant myxoma, and benign cystic papilloma.

The physician may be aided in this differential

diagnosis by the age of the patient, whether the lesion is single or multiple, or diffuse, the location of the lesion, its characteristics on palpation, and the presence or absence of inflammation. We must also consider the evidence of previous injury. All of these factors combined with a careful history and thorough examination of the breasts, the axillae, and the pelvic organs may be helpful in our diagnosis. Pregnancy may be responsible for the sudden growth of either a benign or malignant breast tumor.

Our present knowledge and our methods of treatment at this date allows the physician but one avenue to increase the survival rate from cancer of the breast and this is earlier diagnosis.

Statistics have shown that at least 10 per cent of those with breast cancer who come to the physician with definite breast pathology receive erroneous advice or inappropriate treatment from the first physicians they consult.^{1, 2, 3}

These reports indicate that some physicians believe that they have the uncanny ability to distinguish clinically between benign and malignant breast masses. They could not be more incorrect in their self-respected esteem. The old idea of let us "wait and see" in respect to breast masses should be forever erased from the minds of all physicians. It is well known and very unfortunately substantiated by hundreds of reports in the literature, that even when a tumor the size of a pea has been detected, two-fifths of these patients followed for periods of longer than five years eventually died of breast cancer.⁴

The disappointing experiences reported in literature by numerous surgeons attest to the frightening fact that more than one-third and perhaps as much as one-half of the breast cancers which seem definitely localized in the breast already have impalpable axillary metastases, and some of these extending beyond this boundary.⁵ Physicians and surgeons speak very glibly of "early" diagnosis when they find a small localized mass in the breast with the absence of axillary nodes or other signs of spread. Unfortunately many of us forget that carcinoma travels in an insidious and most quiet path and may not always deposit its cargo of metastases where we are most likely to seek them, but may very well travel quietly on the sea of blood and lymph to some distant port where its deposition and damage has already begun.

If we physicians can educate the public, now remember I do not say only our patients, to see a doctor as soon as they notice the first symptom no matter how slight, and if the doctor makes a correct diagnosis and institutes adequate treatment immediately, the survival rate may improve immeasurably. It is impossible to know which patients will benefit

and which patients will not benefit, since only time can tell. It behooves all physicians to try for the "early diagnosis."

Breast examination must be a routine procedure for all females visiting physicians. We may detect but few breast cancers. We certainly will not miss those present upon routine examination.

In my own practice I find that about 40 to 50 per cent of all breast masses are detected because patients seek treatment for complaints or lumps referable to the breasts. Other breast masses are found upon routine examination. Some had only a slight pain and they could not detect any mass. Upon proper examination small or large masses were found. Those patients with a lump in the breast for many months "but it just began to hurt" were usually in a state of advanced carcinoma when seen by the physician or when operated upon by the surgeon.

In examining patients for cancer of the breast our demeanor must be such as to indicate neither optimism nor alarm. The examination must be conducted with such thoroughness that the patient is convinced that whatever we tell her will be for her own benefit. Thus the stage will be set for further investigation by proper and immediate referral if anything suggestive of abnormality presents itself to our examining hands or experienced eyes. We must be honest and tell the patient that no physician can definitely state which mass is cancerous unless we have a microscopic examination performed. The appointment for surgical consultation *must* be made before the patient leaves your office. If possible for the very same day. And above all not beyond 24 hours hence. Delay is dangerous. Not so much in that the mass will grow in so short a time, but that the patient might be lost for many weeks or even months before she decides to have a biopsy done. This delay could be, and in many instances is, fatal.

The lumps which we feel most usually and most commonly are fibroadenomas, cystic disease and carcinomas.

Fibroadenomas are often anteriorly extruded from the gland surface. They cannot be distinguished from carcinoma on the basis of firmness, contour or fixation. The same number of these are described as painful or tender as are the carcinomas, about 24 per cent.

Areas of fibrocystic disease with small microscopic cysts are more commonly found than are the solitary cysts. These may be suspected when we are told by the patient of sudden onset and fluctuation in size associated with irregular menses. At times these may be differentiated by profile radiography and by transillumination. In experienced hands aspiration may be done to empty the cysts. The errors may very well be made in those patients who have had

excision of one or more of these cysts, and when the next mass occurs the physician or surgeon decides this is another of the same previously excised and decides to ride this one out by watchful waiting. This is a grave error. Just a few months ago one of my patients, a 45 year old white female, who had had one benign cyst removed four years ago and another one excised two years later, came to me with a third mass. Upon examination this mass was certainly identical in size, shape, and consistency as the other two. Nevertheless immediately following my examination I called her surgeon and had this patient on her way to the hospital within eight hours. This mass was malignant! Don't guess. Don't take it for granted that previous performances with cysts or other lumps will always be likewise. The time to remove all lumps in the breast is—NOW. The removal of a benign mass or cyst does no harm. To miss a carcinoma because you wish to spare your patient a small scar may be fatal to that patient.

Most physicians accept the fact that if all cancers could be detected early at the local stage and proper treatment applied, all should be cured. Unfortunately this is not the case. Ignorance, neglect, reluctance and resistance of the patient, coupled with procrastination or lack of urgency by the examining physician are the important factors which tend to delay the accurate diagnosis, treatment and eradication of early cancers.

Education of the physician and patient is most important. In this field the American Cancer Society is to be highly commended for its excellent work in bringing to the public and the profession the constant reminders for early examination, early diagnosis, and early treatment.

Wevill⁶ in 1932 reported a delay of 14 months between onset of symptoms and treatment, whereas Gould and Kerr⁷ in 1955 showed a delay of only 8.2 months ranging from a few days to eight years. These two studies show that some improvement has been accomplished in earlier diagnosis and treatment from 1932 to 1955, probably due to greater education of the public and better understanding by most physicians of the relative danger of any and all breast masses.

If a lump in the breast is found by any physician who does not do general surgery then it is the duty of the examining physician, whether he be general physician, internist, orthopedic specialist, or proctologist, to prepare that patient to visit the surgeon of choice almost immediately. We must tell the patient that the lump:

1. Must be removed—without delay.
2. That this will be done in a hospital under a general anesthetic.
3. That only after the mass has been removed and immediately examined under the micro-

scope by a qualified pathologist will the surgeon know whether the mass is benign or malignant and just how much surgery will be needed.

4. Let the surgeon take it from this point—but it is YOUR job to get the patient to the surgeon NOW!

If a lump is found, no matter how insignificant, don't wait and see what will happen. If you are in doubt whether you even feel a lump—this doubt should be enough to have consultation to prove or disprove your doubts. There is only one way to save lives in cancer detection of the breast—EARLY DIAGNOSIS. You must see it. You must feel it. You must remove it.

SUMMARY

The role of the private physician, especially the general physician, in the detection of cancer of the breast resolves itself into these three important points: (1) constant suspicion; (2) thorough examination and history taking; and (3) immediate removal of breast lumps for early accurate diagnosis.

Although technics in surgery of the breast have improved immeasurably in the past 25 years, the survival rate has not improved appreciably unless the diagnosis is made early. Procrastination by the patient before coming to the doctor or the failure of the examining physician to be constantly on the alert by proper and complete examination and adequate history taking could very well be the reasons for some of our "too late" diagnosis.

It is our duty to have consultation and to use any and all sources in our means to make the early diagnosis if we are to improve our survival rate for patients with cancer of the breast. Only then will our survival rate begin to approximate the operative potential.

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Vaginal Hysterectomy

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THE first successful vaginal hysterectomy was done by Langenbeck in 1813.¹ This operation was done for prolapse, and the patient lived for many years afterward in excellent health. In 1828 the English surgeon, Blundell, did a vaginal hysterectomy for cancer of the uterus. The patient lived nearly a year, then died of recurrent carcinoma. The French surgeon, Recamier, in 1829, did a vaginal hysterectomy for cancer, and his patient lived about one year.

Aside from the three redeeming cases mentioned above, the early history of vaginal hysterectomy presents a picture of terrible morbidity and mortality which led conservative surgeons about 1830 in England and continental Europe to condemn the operation and to advise that no more hysterectomy operations be attempted. The reader is referred to the monograph of Kennedy and Campbell for an excellent account of this period.

During the latter part of the nineteenth century, due to the efforts of the great surgeons of that time, notably Billroth, Czerny, Schroeder and Pean in Europe, and Joseph Price in this country, vaginal hysterectomy became established as a safe and useful operation.

In the early part of the present century, however, the advances made in abdominal surgery provided such easy access to the uterus that interest deviated toward use of the abdominal approach in performing hysterectomy. This trend reached an extreme in some localities where vaginal hysterectomy became a forgotten art. At the same time, nevertheless, progress toward perfection of the operation of vaginal hysterectomy was being made, notably by Peham and Amreich² in Vienna and Heaney in Chicago.³ Emphasis was placed by them on the safety of vaginal hysterectomy. Reports by others have corroborated their views.^{1, 4, 5, 6, 7}

The present report is a review of all the cases in which vaginal hysterectomy has been done by the authors, a total of 135 operations performed during the past ten years. There have been no operative deaths, and serious complications have been infrequent. During the period of the study we had 147 cases in which hysterectomy was done by the abdom-

inal approach, nine cases in which vaginal excision of a cervical stump was done, and four cases in which the Spalding-Richardson composite operation was performed. The Manchester-Fothergill operation was done on one patient. Simple vaginal plastic operations were done on five cases where previously hysterectomy had been performed, and colpectomy was carried out on one patient for recurrence of carcinoma in situ in the vaginal vault. There were no operative deaths in any of these cases.

In studying our vaginal hysterectomy operations we have used the method of grouping the cases which was employed by Gray:⁶ firstly, those cases having prolapse; secondly, cases having uterine pathology and poor support; and thirdly, cases with uterine pathology without abnormal pelvic relaxation. There were 51 cases in the first group, 62 in the second group, and 22 cases in the third group. It is in the third group where controversy can arise over the choice between abdominal and vaginal approach. The authors have avoided stunt surgery which might be dangerous, such as morcellation of large pelvic tumors; but several cases with enlarged uteri, some containing multiple small fibroids, have been treated by bisection of the uterus and morcellation with pleasing results.

The technic used has been essentially that of Heaney.⁸ The Heaney retractors, needle holders, and hemostats are designed particularly for vaginal hysterectomy operations. Also most useful are the Glenner retractor,⁹ which presses on the posterior edge of the vaginal vault and keeps the rectum out of the way, and the paired Glenner clamps,¹⁰ one for the right and one for the left uterine artery. Our method is very little different from that described by Heaney. We do, however, prefer to close the peritoneum as a separate layer, at which time we dissect the peritoneum of the cul de sac away from the posterior vaginal wall and include this slack in the peritoneal closure, thus obviating the development of future enterocele. If an anterior plastic procedure is needed, that is done immediately after the peritoneal closure. The vault is then suspended from the ligaments on each side very much as described by Heaney.

In those cases where removal of the adnexal structures is indicated, the method described by the Vien-

nese surgeons, Werner and Sederl,¹¹ has been found helpful: Before the broad ligament is clamped, the uterus is bisected sagittally; then the infundibulopelvic ligament is clamped, cut, and ligated; after which the lower part of the broad ligament is divided by clamping and cutting. Using this method one can even remove chronically inflamed tubes and chocolate cysts of the ovaries with very little difficulty.

The table presented below shows the number of cases of various uterine disease conditions treated.

Uterine fibroids	40
Adenomyosis	18
Chronic cervicitis	13
Menometrorrhagia	13
Carcinoma in situ of cervix	4
Dysmenorrhea	2

The fibroids treated by vaginal hysterectomy were mostly small ones. Multiple small and medium-sized fibroids are easily handled by bisection and morcellation of the uterus. We have, however, avoided morcellation of large solitary uterine tumors for fear of encountering a sarcoma, fragmentation of which would be poor technic. Adenomyosis is very satisfactorily treated by vaginal hysterectomy whenever anatomical conditions favor the vaginal approach. Some multiparous patients with severe chronic cervicitis which has proved refractory to treatment by repeated cauterization are best handled by vaginal hysterectomy. Those cases of vaginal bleeding which do not respond to hormone therapy or repeated curettage can be treated successfully by vaginal hysterectomy. Carcinoma in situ of the cervix can be safely and effectively treated by vaginal hysterectomy. The vaginal operation offers an excellent opportunity to place the incision well away from the lesion of the cervix, and it is improbable that dissemination will occur from carcinoma in situ, even though the uterus is roughly handled during the operation.

In 27 cases operations were performed on the adnexal structures at the time of vaginal hysterectomy. The operations on the adnexae included plastic operations on cystic ovaries and removal of diseased tubes and ovaries. In some cases in the 45 to 55 age group normal ovaries were removed as prophylaxis against carcinoma of the ovary.

The complications of vaginal hysterectomy in the present series were not numerous. Accidental injury to the bladder was incurred in one case. This was immediately recognized and repaired, and the bladder healed satisfactorily. This same patient had postoperative phlebitis. There was one other case of postoperative phlebitis in our series. In one case it was necessary to do laparotomy to control hemorrhage, because a ligature slipped from the broad ligament. There were two cases of secondary hemor-

rhage. These hemorrhages were controlled by light vaginal packing, and the patients were kept in the hospital for a few days afterward. Blood transfusions were not necessary in either case. A very distressing complication occurred in a patient who had both arms abducted on arm-boards during the operation: bilateral paralysis of the biceps muscles, which lasted six weeks. During this time the patient needed constant care; because she could not feed herself, comb her hair, or even blow her nose without assistance. Since that experience we have avoided abduction of both arms during operation. Our sickest case was a young woman who developed gangrenous appendicitis postoperatively. Appendectomy was done on the tenth day after vaginal hysterectomy. Subsequently a pelvic abscess was drained through the vaginal vault, after which the patient gradually recovered.

The results of plastic repair of the vagina at the time of vaginal hysterectomy have been good in all but four cases. In these four cases further vaginal plastic operations were necessary from one to five years after vaginal hysterectomy. The results of these secondary plastic procedures were satisfactory. There have been no occurrences of cystocele, enterocele, or rectocele in our third group of cases, those having no impairment of support previous to operation.

Our experience with aged patients has been similar to that of Smith and Pratt:¹² Patients of advanced age tolerate vaginal hysterectomy very well. Nine of our patients were over 70 and two of these were over 80.

Recent reports^{13,14} concerning vaginal hysterectomy after previous pelvic surgery state that prior surgery is rarely a hindrance. Our experience is in agreement on this point. In our series 34 patients had had previous lower abdominal surgery; of these cases three had had uterine suspension operations. Technical difficulties in doing vaginal hysterectomy on these patients who had had prior surgery were for the most part minor. In some cases there were adhesions attached to the fundus of the uterus, but these were divided without untoward incident. In only one case was it necessary to give up the attempt to remove the uterus vaginally and proceed to laparotomy because of previous pelvic surgery. This patient had had a ventral fixation of the uterus, and the case is included in the abdominal hysterectomy grouping. One of our vaginal hysterectomy cases had had a previous interposition operation, and we did vaginal hysterectomy for recurrence of prolapse. Hysterectomy and repair were accomplished without difficulty.

SUMMARY AND CONCLUSIONS

A series of 135 consecutive cases in which vaginal hysterectomy was performed is presented. There

were no operative deaths, and complications were infrequent. Patients with prolapse, even the very aged, were successfully treated by vaginal hysterectomy. Disease of the uterus in many cases was satisfactorily handled by removal of the uterus through the vagina. Vaginal hysterectomy is a safe and useful operation. The excellent results obtained, the absolute prophylaxis against carcinoma of the uterus procured, and the opportunity offered to ablate a diseased uterus make vaginal hysterectomy the operation of choice for most cases having pelvic relaxation to a degree which demands surgical treatment. Also, many cases in need of hysterectomy for uterine disease, even though lacking abnormal pelvic relaxation, can be advantageously handled by vaginal hysterectomy, particularly those cases where the appendix has been previously removed, for appendectomy is the sole undisputed benefit obtained by use of the abdominal approach when it is necessary to remove the uterus for benign disease in a patient presenting anatomical features which will allow vaginal hysterectomy.

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Congenital Aortic And Subaortic Stenosis

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IN Maude Abbott's analysis of 1,000 autopsied cases of congenital heart disease,¹ there were only 11 with aortic stenosis and 12 with subaortic stenosis. Thus such lesions were considered uncommon until increasing accuracy of diagnosis was stimulated by the challenge of surgical correction for congenital cardiac defects. My own reported experience with 10 cases in 1944² was subsequently followed by numerous other larger series, mainly in the American and British literature,³⁻¹¹ so that at present a much higher incidence of its occurrence is recognized.

The incidence among patients with congenital heart disease has been estimated at one per cent,⁹ three per cent^{6, 11} or six per cent⁷ by various authors. True incidence, however, cannot be determined inasmuch as any series is based on a selected group of patients comprising either those who have serious illness and require hospitalization, or those whose murmurs are considered significant enough for them to be referred to a specialized clinic. I am quite certain that there are mild cases of this anomaly that never come to specialized cardiological attention for further elaboration of their diagnosis. Many children present such minimal murmurs that under circumstances of routine physical examination they may frequently be overlooked. I also believe that in such patients this may be such a benign non-progressive disease that it does not even bring them to a physician at a later age.

For clinical purposes both subaortic and aortic stenosis may be linked together. There is no method of differentiation on the basis of physical, roentgenographic, or electrocardiographic findings. It has been stated³ that determination of the site of the two lesions can be made on the angiocardiogram. A recent report¹² has indicated that left heart catheterization can differentiate the two. The demonstration of an abrupt pressure change between the left ventricle and the aorta occurs with pure valvular stenosis, whereas a transitional pressure zone is obtained when subaortic stenosis is present. This differentiation, when possible, can be of considerable practical advantage to the surgeon relative to his correction of the defect.

PATHOLOGY

Commonly the valve cusps are thickened and fused at the commissures, forming a dome-shaped diaphragm with a central perforation. At times this diaphragm is rather thin and pliable so that an active functioning valve may be obtained if separation can be achieved along the line of the rudimentary commissures. Even this more readily correctible valve may be set in a narrowed ring so that surgery can offer only partial relief to the obstruction of the outflow tract of the left ventricle. This was the experience in one of our recently operated patients.

In another type of congenital stenosis there is severe irregular thickening of the valve with no rudimentary commissural separation of the cusp (Figure 1A). This is obviously poorly amenable, if at all, to successful surgical correction.

The subaortic lesion is said to be less common than the aortic. This may, however, be a false conclusion based on earlier autopsy experience with only the more severe degrees of cardiac disease, for its recently described incidence based on surgical experience¹² is much higher. This lesion is found as a firm raised fibrous ring of tissue one to 15 mm. below the base of the aortic valve. It is usually two to four mm. in height and extends one to 10 mm. into the ventricular cavity (Figure 1B). Microscopically this raised band or shelf consists of hyalinized connective tissue covered by intact, flattened endothelium. It is believed to represent a remnant or "arrest of atrophy" of the bulbus cordis which normally disappears completely from the left side of the heart.¹³

An occasional case of supravulvar stenosis clinically simulating these lesions has been described. This consists of a contraction of the aorta at the upper margin of the Sinuses of Valsalva. Another variant of subaortic stenosis occurs due to a thickening of the outflow portion of the left ventricle, analogous to the much more common infundibular type of stenosis involving the right ventricular outflow tract.

A bicuspid aortic valve is usually not responsible for signs of aortic disease. It may, however, be accompanied by a subaortic stenosis. With the passage of time and the development of calcification, either

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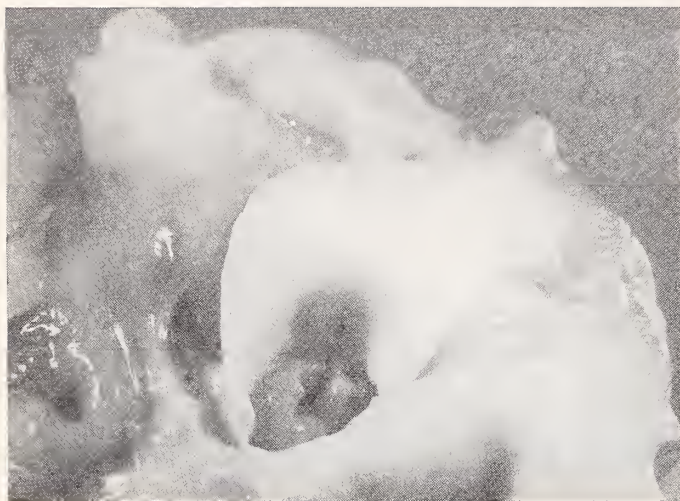


FIGURE 1A

Valvular aortic stenosis in a three month old baby showing irregular thickening of the valve with no rudimentary commissural formation.



FIGURE 1B

Subaortic stenosis in a 14 year old girl who also had a patent ductus arteriosus. A thick band of tissue extends along the bases of the cusps of the aortic valve and fuses with them.

secondary to recurrent impact of blood against the bicuspid valve, or due to super-imposed bacterial endocarditis, the bicuspid valve itself may become stenotic and then be clinically indistinguishable from the other forms of aortic stenosis.

MATERIAL

The experiences reported in this presentation are based on 90 patients followed in the Children's Cardiac Clinic at Montefiore Hospital. Seventy-three of these are patients with isolated aortic or subaortic stenosis; 49 are male and 24 are female. Eleven have this lesion combined with a patent ductus arteriosus; eight are female and three male. Five boys have an associated coarctation of the aorta. In addition, one boy shows coarctation of the aorta, a patent ductus arteriosus and aneurysms of the Sinuses of Valsalva.

The ages of these patients when first seen ranged from one to 16 years except for seven older patients, ages 26-46, who were part of a special study on the familial aspects of this disease.¹⁵ Many have now been followed for a 10 year period. Significantly, in the vast majority there has been no fundamental change in their clinical status.

The criteria for diagnosis of congenital aortic or subaortic stenosis are presented in Table 1.

TABLE I
CRITERIA FOR DIAGNOSIS OF CONGENITAL AORTIC OR
SUBAORTIC STENOSIS

HISTORY

No history of rheumatic fever

Knowledge of a murmur at an early age

PHYSICAL EXAMINATION

Systolic murmur over the aortic area, radiating into the neck

Systolic thrill over the aortic area, and often over the carotid artery

A₂ normal or diminished

Pulse pressure usually normal

No evidence of mitral valvular disease

ECG—normal or left ventricular enlargement

X-RAY—left ventricle normal or slightly enlarged; supracardiac aorta often dilated.

CAROTID ARTERY PULSE

Prolonged Ejection Phase

Anacrotic Notch

Plateau Appearance

Double Peak

Systolic Vibrations

PHONOCARDIOGRAM — “diamond-shaped” aortic systolic murmur

Where associated lesions have been present, their clinical recognition has not been difficult.¹⁵ Coarctation of the aorta was easily discernible from the characteristic blood pressure and pulse relationships in the arms and legs seen in this disease. When a patent ductus arteriosus has also existed, it has been readily determined by the presence of the classical continuous machinery murmur in the second left intercostal space with radiation below the clavicle. This was different from the aortic systolic murmur (and occasional diastolic blow) in location, intensity, quality, and pitch.

While it is recognized that a negative history for rheumatic fever does not rule out the diagnosis of rheumatic heart disease, it is still axiomatic that rheumatic fever rarely appears earlier than the age of five. Exceptions, of course, are seen. More important, however, is the fact that rheumatic involvement of the aortic valve in childhood and adolescence is manifested by aortic insufficiency rather than aortic stenosis.

Many of these children have a history of a murmur having been heard at birth, but not uncommonly the murmur has been first noted between the ages of three to five years on routine examination. The murmur is characteristically harsh, rough and somewhat high-pitched, usually rather loud, heard maximally in the second and first interspaces to the right of the sternum. Not uncommonly, however, there is considerable transmission of this murmur to the lower left sternal border. In young children, very frequently it is heard with maximal intensity in this location, at times simulating other congenital defects. As the child gets older, the murmur often travels upwards from the lower left sternal border and is louder in the second left interspace but ultimately usually achieves maximal intensity in the second right. Transmission of this murmur into the neck is invariably present; most commonly it is also heard with lesser intensity in the upper back on both sides. A mild early aortic diastolic blow was heard in only four patients in this series.

Almost invariably a systolic thrill accompanies the murmur in the second right interspace. If it is not felt here, it will always be felt in the carotid vessels or the suprasternal notch. The intensity of this thrill seems to vary from time to time on repeated examinations of these children. A not uncommon experience has been failure to find the thrill on initial examination thus making the diagnosis less apparent than when the child is subsequently seen.

Rarely is the aortic second sound diminished in intensity. Its presence or diminution has not proved to be of value in attempting to differentiate as to whether the valve or the subaortic area is involved. The pulse pressure is almost always normal, thus differing from that found in many cases of adult

aortic stenosis. The demonstration of a mitral valve lesion, of course, almost invariably eliminates the probability that the aortic lesion is congenital in nature. Nevertheless, the rare patient with congenital aortic stenosis may contract rheumatic fever and ultimately involvement of the mitral valve. I have now followed two such patients whom I saw with their initial attack of rheumatic fever at a very early age. At this time they both had evidence of congenital disease of the aortic valve and over the years have shown increasing evidence of mitral stenosis as well.

In the milder cases the electrocardiogram is normal, thus reflecting the lack of significant obstruction to left ventricular outflow at the aortic valve. Of the 73 patients with isolated aortic or subaortic stenosis, evidence of left ventricular hypertrophy was demonstrated in 40. Twenty-one patients showed both roentgenographic and electrocardiographic evidence of left ventricular enlargement, nine showed this by x-ray alone, and in ten the electrocardiogram showed it when the x-ray interpretation was that of a normal left ventricle. This is somewhat different from the congenital cardiac situations in which the right ventricle is enlarged. Here the electrocardiogram is much more sensitive for determination of right ventricular enlargement than is the roentgenogram.

Where an associated patent ductus arteriosus or coarctation of the aorta has been present, the degree of cardiac enlargement by x-ray and/or electrocardiogram has seemed to be more closely related to the associated defect rather than the aortic lesion. In our patients with combined lesions, except in two patients with patent ductus arteriosus, the aortic stenosis has not seemed to be the significant dynamic lesion. In these two, now several years sub-



July 13, 1954

November 9, 1956

December 30, 1959

FIGURE 2

Progressive cardiac enlargement in a six year old boy with congenital aortic stenosis.

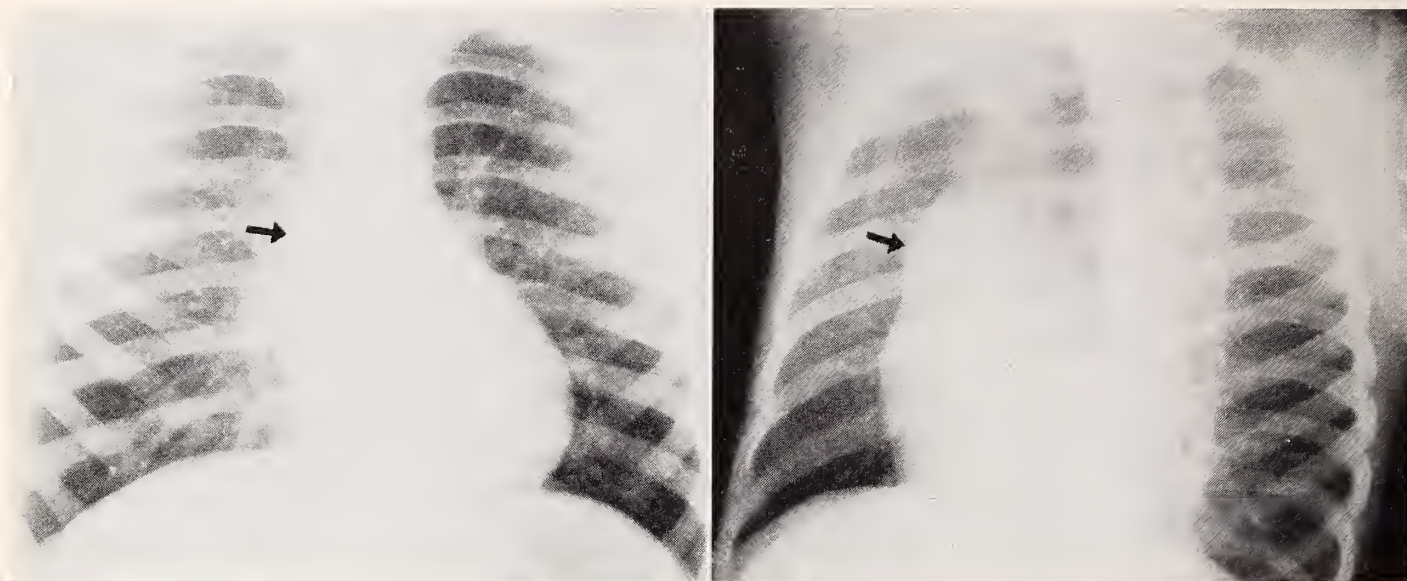


FIGURE 3

Ten year old boy with congenital aortic stenosis. Dilatation of the supra-cardiac aorta is clearly noted in the posterior-anterior projection and distinct localized bulging of this area is seen in the left anterior oblique view. Fullness of the left ventricular segment is also noted in both views.

sequent to division of the patent ductus arteriosus, there is evidence of increasing enlargement of the left ventricle undoubtedly due to the aortic valvular obstruction.

The degree of enlargement of the left ventricle seen by x-ray in this condition is usually not very marked. It consists primarily of an elongation of the left ventricular segment in the posterior-anterior projection and occasionally a slight bulging and fullness of this ventricular segment in the left anterior oblique position (Figure 2). In children we have rarely seen severe degrees of enlargement of the left ventricle.

Although previous authorities^{3,9} have indicated that roughly 40 to 50 per cent of patients with congenital aortic stenosis or subaortic stenosis show a supracardiac dilatation of the aorta, this has not been too common in our series, for in only 16 of the 73 "pure aortic" patients has this been demonstrated with certainty (Figure 3). Here we find that fluoroscopy is of much greater value than the plain roentgenogram in the posterior-anterior or left anterior oblique views. Positioning of the patient is more readily obtained relative to optimal site for delineation of the aortic dilatation, and the appearance of a "jet-like" pulsation of the supracardiac aorta is also noted on fluoroscopy. This is rather comparable to the "jet-like" type of pulsation frequently seen in the presence of pulmonic valvular stenosis with post-stenotic dilatation of the pulmonary artery. Where this is clearly recognizable, I believe it is helpful in differentiating in the older age group congenital from rheumatic aortic valvular disease.

Mention might be made that we have failed to

see calcification of the aortic valve or the subaortic area in any of our group of 90 patients. It has, however, been described in some children between the ages of 12 and 15 in the absence presumably of healed bacterial endocarditis of the aortic valve.

Figure 4A shows examples of carotid artery pulsations characteristic of obstructive disease of the aortic valve. Most significant is the delay in arrival of the peak of systolic ejection due to the obstruction to left ventricular outflow. In our normal control group the peak has always come within 0.12 seconds of the onset of ejection. In the presence of aortic stenosis it is delayed beyond 0.15 seconds. The appearance of an anacrotic notch, a plateau, a double peak, and systolic vibrations are additional evidence of aortic or subaortic stenosis. I do not believe that we can differentiate between the two conditions on the basis of the pulse tracing. The pulse tracing alone cannot be used as an exclusive diagnostic feature. The clinical findings are sufficiently clear to be diagnostic; the laboratory studies are only corroborative of a clinical diagnosis. The severity of the stenosis cannot be quantitatively correlated with the degree of abnormality of the carotid artery pulse tracing. It serves no purpose, therefore, in evaluating the necessity for surgical intervention.

Figure 4B shows the characteristic "diamond-shaped" murmur of aortic stenosis. This is usually obtained with maximal intensity in the second right interspace or in the suprasternal notch. It should be noted that this murmur starts after the onset of systole, then reaches a peak and subsequently assumes a decrescendo character. This is in strong contrast to the holosystolic murmur of an interventricular septal defect which begins immedi-

ately with systolic contraction and persists with almost equal intensity throughout the cycle. The phonocardiographic representation of the aortic systolic murmur also has no quantitative value.

Most children with congenital aortic or subaortic stenosis do not have symptoms. When they do, complaints are of fatigue, mild exertional dyspnea, and in the occasional case, attacks of syncope or chest pain. In general, in the children with symptoms there is usually evidence of cardiac enlargement by x-ray or electrocardiogram. Conversely, however, most of those who demonstrate enlargement of the

heart, do not have symptoms. The major problems arise, therefore, relative to the method of handling such patients, their future life anticipation, and the indications for surgical correction.

Congestive heart failure, except in some infants below the age of one and some of the older children who more commonly have associated lesions, is rarely a problem in these patients. More important is the potential for sudden death and for bacterial endocarditis. In our own group, three with isolated disease of the aortic valve have had bacterial endocarditis, one having had it on two separate occa-

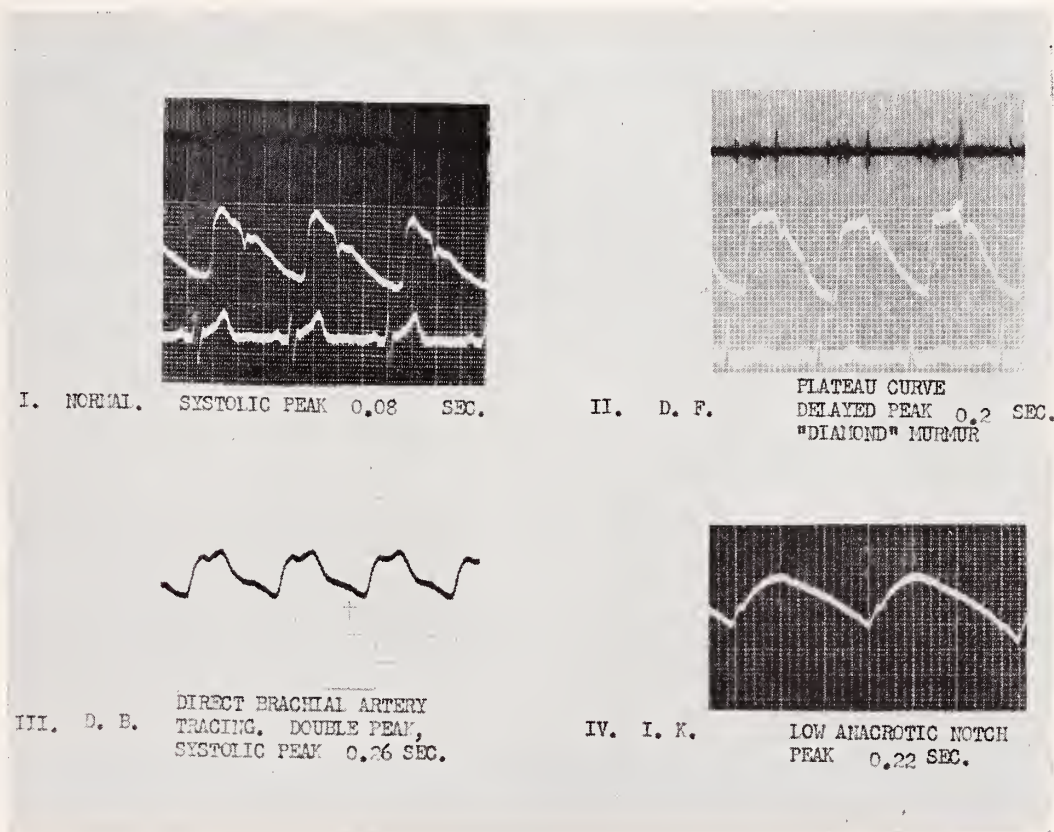


FIGURE 4A

Arterial pulse tracings demonstrating three types of curves seen in aortic valvular or subvalvular obstruction. I, II, and IV are direct carotid artery tracings. III was obtained on direct brachial artery puncture.

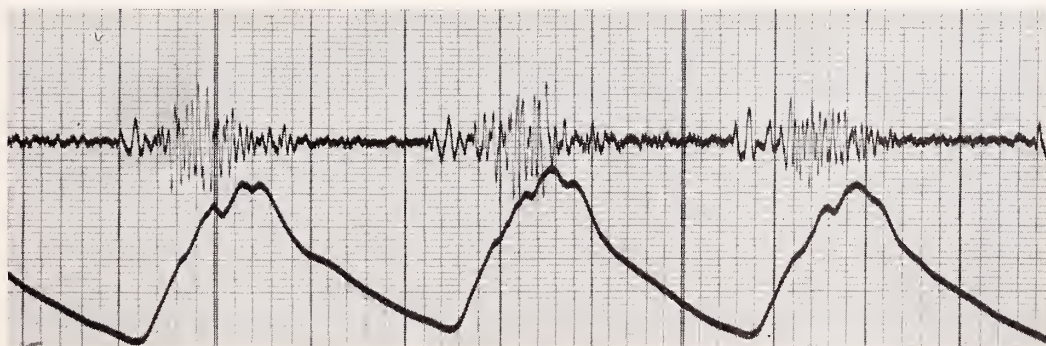


FIGURE 4B

Typical "diamond-shaped" murmur of aortic stenosis and indirect carotid artery curve showing delayed peak of systolic ejection (0.21 seconds) and anacrotic notch.

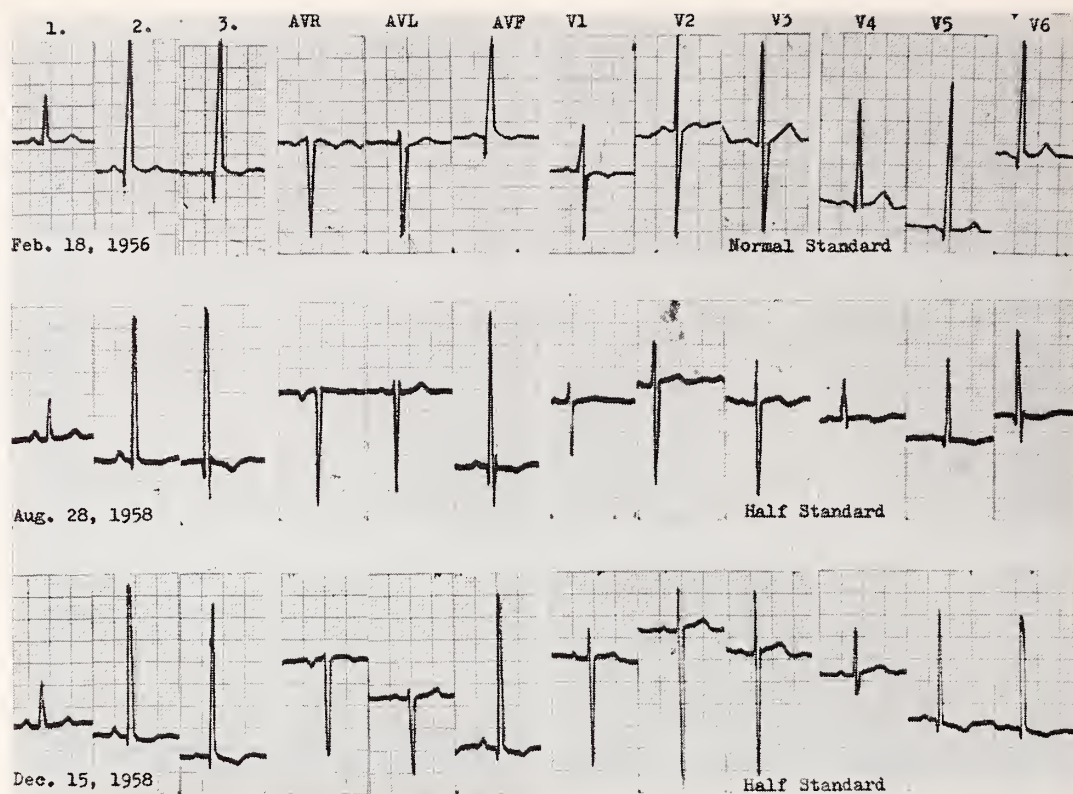


FIGURE 5

Electrocardiogram in a nine year old girl with severe congenital aortic stenosis. Marked left ventricular hypertrophy in a vertical heart is noted with evidence of progressive enlargement and the development of ST and T wave changes referable to the left ventricle.

sions. The highest incidence of bacterial endocarditis has been in the group in which a patent ductus has also been present. In one patient this was on the patent ductus and was cured. In three other patients of this group, however, the bacterial endocarditis was on the aortic valve. In two of these patients this has been a major cause of cardiac disability. In one a perforation of the aortic valve occurred months after division of the patent ductus; this patient ultimately died of severe aortic insufficiency. A second patient has developed aortic insufficiency for the same reason, and shows progressive evidence of cardiac enlargement. A third patient ultimately operated for her patent ductus, did not show evidence of the endocarditis on the ductus so that it is assumed it was on the congenital aortic valve. In our five patients with associated coarctation of the aorta, one has had cured bacterial endocarditis involving the aortic valve alone. On surgical excision of the coarctation subsequent to cure of the bacterial endocarditis, there was no evidence that this disease process had been located at the site of coarctation.

While we have been fortunate to have no patients die suddenly due to this congenital anomaly, sudden death is a very real potential hazard in this condition. Thus, this occurred five times in 73 patients reported by Braverman and Gibson,¹⁰ five out of 67

reported by Nadas,⁹ two out of 56 reported by Keith,¹¹ three out of 37 reported by Downing,⁸ and three out of 26 reported by Marquis and Logan.¹⁶ Out of this group the incidence would therefore be seven per cent.

It is most important to note that activity is not necessarily a precipitating factor in sudden death in such patients. A larger number apparently have been inactive prior to the onset of their demise. Almost invariably such patients have been symptomatic. In the majority, evidence of left ventricular hypertrophy by electrocardiogram has been present. Most of these show the so-called "left ventricular strain" pattern as evidenced by T wave inversions and ST depressions in relation to the left side of the heart (Figure 5).

MANAGEMENT

How then shall we manage patients with congenital aortic or subaortic stenosis? Certainly the majority of them who have no evidence of cardiac enlargement and are asymptomatic can be considered as normal children, at least in the younger age group where competitive activity is not a factor. Periodic examinations at yearly intervals are probably adequate in such children for determination of progressive cardiac involvement. Precautions as to antibiotic therapy relative to dental extraction, ton-

sillectomy and adenoidectomy, and other surgical procedures are mandatory.

Those who have mild evidence of cardiac enlargement by x-ray or electrocardiogram and no symptoms, probably can be observed pending development of further evidence of cardiac involvement or improving techniques and safety of cardiac surgery. The patient who is more than mildly dyspneic and who has suffered attacks of syncope probably even in the absence of demonstrable cardiac enlargement should be considered for surgical correction. The patient who is showing progressive enlargement by electrocardiogram with inversion of T waves and/or depression of ST segments should be considered for immediate surgery.

It must be remembered, however, that although adequate relief of obstruction at the aortic valve orifice will relieve the burden on the left ventricle and probably prevent a sudden demise and the ultimate development of heart failure, it will not cure the condition. Rarely has surgical correction resulted in complete loss of the gradient across the aortic valve. The hazard of bacterial endocarditis has, I am certain, by no means been eliminated merely by widening the aortic valve or subaortic orifice. Obviously this still irregular and deformed area exists as a potential site for localization of bacteria.

Surgical experience has been too short for adequate long-time follow-up relative to the ultimate outcome of relief of obstruction in such patients. Nevertheless, those who fit the previously mentioned criteria certainly merit an attempt at improvement of their condition. With improving techniques the hazards have lessened relative to surgery, but still are rather formidable. The procedure requires the use of the cardiac by-pass and artificial pump oxygenator with selective cardiac arrest. The hazards of cardiac arrest in the presence of a large left ventricle are formidable and present certain dangers relative to recovery of cardiac action after successful opening of the valvular or subvalvular obstruction.

SUMMARY

The diagnostic features and clinical findings based on 90 patients with congenital aortic or subaortic stenosis are presented. In roughly half of these patients the condition is so mild that evidence of cardiac hypertrophy is not obtained. The impression is gained that this may be a benign non-

progressive disease in a substantial number. The method of handling such patients and the potential hazards of bacterial endocarditis and sudden death are discussed.

Surgical relief of the aortic obstruction is indicated in the patient who has had syncopal attacks and in those with increasing enlargement of the left ventricle by x-ray or electrocardiogram. The long-term results of surgical intervention are not known, but neither total "cure" nor prevention of bacterial endocarditis can be anticipated by this approach.

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Plumbism Following The Use Of A Blow-Torch On Paint

JACOB DORFMAN, M.D. AND MICHAEL DAVIS, M.D.

Rocky Hill

LEAD has been used in many industries for hundreds of years. Poisoning with this heavy metal was a frequent intoxication up to about 40 years ago. Effective measures of prevention, education and improvement in working conditions have brought about a marked reduction in its incidence. Lead can be ingested, inhaled or absorbed through the skin and mucosal surfaces. Ingestion of the metal may occur through the medium of contaminated food or liquids. Use of hair dyes and cosmetics or careless handling of gasoline containing lead has often caused poisoning from absorption through the skin. However, inhalation of lead fumes is the most hazardous mode of entry into the body.¹ Most of the ingested metal can be removed and handled by the liver. On the other hand, inhalation of pathogenic amounts of lead fumes results in rapid dissemination throughout the body, followed by the appearance of marked toxic effects involving many systems. The purpose of this paper is to present a case of plumbism caused by the inhalation of lead fumes which resulted from the application of a blow torch to paint.

CASE REPORT

The patient was a 52 year old white male, who entered the State Veterans Hospital, Rocky Hill, Connecticut on March 26, 1957. He complained of weakness of the legs, poor appetite, and low back pain which encircled the waist and radiated into the lower abdomen. About four weeks prior to admission, he had developed an acute illness with generalized aches and pains and malaise, which lasted about two days. Shortly thereafter he had noted the onset of the symptoms mentioned above. The patient also complained of mild diarrhea with the passage of two watery stools daily. He had not noticed any tarry or grossly bloody stools. There was no history of constipation. There was questionable weight loss.

Past History: Appendectomy at the age of 27. Peptic ulcer was diagnosed about 20 years ago. In April 1956, he had a recurrence of ulcer symptoms which subsided with medical management. In August 1954, he was hospitalized because of coronary occlusion with infarction of the myocardium. There was a history of chronic bronchitis.

Occupation: Patient had been a house painter for many years.

Physical examination on admission disclosed a malnourished male who did not appear to be acutely ill. He was five feet eight inches tall and weighed 124 pounds. The temperature was 98.2° F. Pulse rate 72 and respirations 20 per minute. The abnormal physical findings included: edentulous mouth, tenderness in the lower quadrants of the abdomen, atrophy of the right testis, small external hemorrhoids, and slight enlargement of the left lateral lobe of the prostate. There was no evidence of disease involving the nervous system.

Plumbism was first suspected when the laboratory reported an unusual number of stippled red cells in the blood smear. The patient was then questioned about the exact nature of the work he had been doing. He said that he had recently been employed in removing several layers of paint from the woodwork of a house that was more than 100 years old. In some areas, the paint was one-quarter inch thick and he had used a blow torch to facilitate its removal.

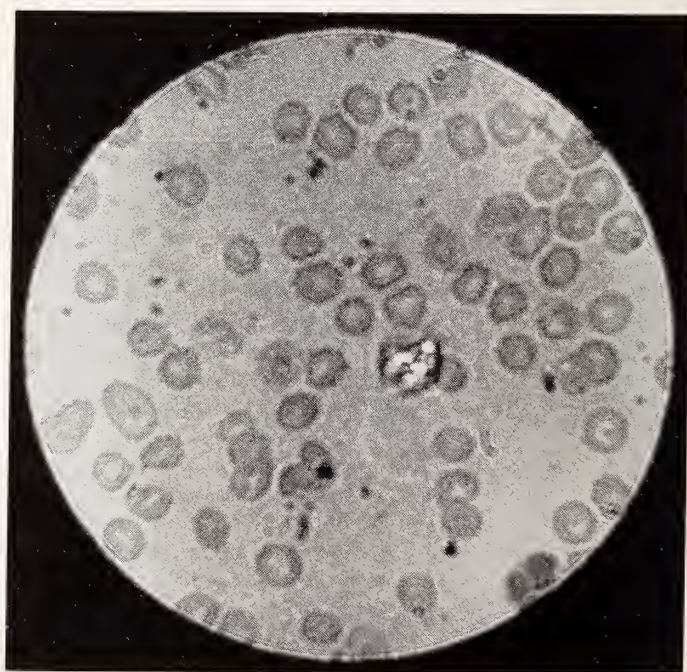


FIGURE 1

Peripheral blood smears before treatment show many red cells with basophilic stippling.

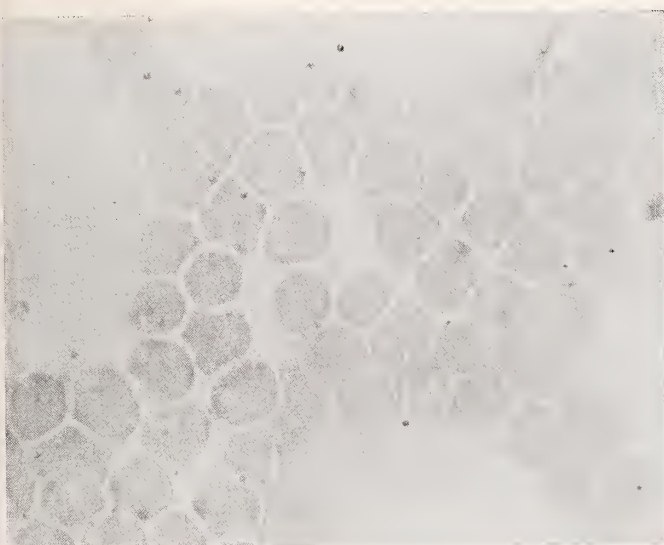


FIGURE 2

Peripheral blood after treatment showing normal red cells.

The windows had been closed most of the time because of the draftiness.

Laboratory data: Hemoglobin on admission was 11.5 grams. White blood cell count and differential were not remarkable. The blood smear showed many stippled red cells. Urinalysis was not remarkable. The blood urea nitrogen was 17 mgm. per 100 cc. Direct bilirubin was 0.3 mgm. per 100 cc. The red blood cell fragility test disclosed no abnormality. The Coombs test was negative. On April 2, samples of blood and urine were submitted to the State Department of Health Laboratory in Hartford for determination of lead content. The urine contained 0.30 mgm. of lead per liter (normal: 0.01 to 0.08 mgm. per liter). The blood contained 0.14 mgm. per 100 grams (normal 0.01 to 0.05 mgm. per 100 grams). Bone marrow aspiration disclosed hyperplasia, predominantly of the myeloid elements, with stippled red cells. A reticulocyte count on April 9, was 3.2 per cent. Platelet count on April 15, was 167,000 per cu. mm.

X-ray studies: Chest plate disclosed healthy lungs. A pleural plaque was seen at the right cardiophrenic angle. A barium enema was normal. X-rays of the lumbosacral spine showed no abnormality. An upper gastrointestinal series revealed widening of the mucosal folds throughout the stomach. The duodenal bulb appeared deformed but no definite ulcer crater was seen. There was no gastric retention or acceleration of intestinal transit. Gastroscopy was recommended but refused by the patient.

Treatment: Medications included Probanthine in doses of 15 mgm. four times a day and Demerol, 50 mgm. as needed, for relief of severe abdominal pain. He was given multivitamins and a nutritional formula. Administration of small doses of saturated solution of Potassium Iodide was begun on April 5,

and maintained for two weeks. The patient's symptoms gradually subsided during this time. His stools became formed and normal appetite returned. The backache was the last to disappear.

A blood count on April 15, had disclosed 4,110,000 red blood cells per cu. mm., hemoglobin 11.0 grams per 100 cc. and white blood cells 9,600 per cu. mm., with normal differential. Only a rare stippled red cell was seen on smear. A hematinic was added to the regimen at this time. Complete blood count on April 23, revealed 4,170,000 red cells per cu. mm., and 12.1 grams of hemoglobin per 100 cc. An occasional stippled red cell was seen. Reticulocyte count on April 24, was 2.6 per cent. Blood and urine studies for lead on April 30, showed 0.07 mgm. lead per 100 grams blood and 0.19 mgm. lead per liter of urine which contained 4+ porphyrins. It was felt that the patient had recovered sufficiently to warrant his discharge on May 2. He was cautioned to observe the rules of safety when working with paint and was advised to continue taking the hematinic, unless otherwise instructed by his physician.

DISCUSSION

Application of sufficient heat to materials containing lead or to metallic lead may result in the formation of lead fumes. Pathogenic amounts of fumes may result from burning, welding, or melting operations applied to surfaces bearing heavy coats of lead or materials containing lead. The season may influence the incidence of occupational lead poisoning. Extended periods of increased lead absorption may occur during the cold months of the year when doors and windows are usually closed. However, adequate ventilation may not protect the individual who is exposed to large amounts of fumes. Poisoning of workers engaged in burning, welding, or melting operations carried on in the open, such as in bridge repair, has occurred.² Our search of the literature on the subject did not uncover any cases of plumbism reported as resulting from the use of a blow torch on painted surfaces. Henderson, L., reported a case of lead poisoning complicated by jaundice in a 24 year old white man, who had spent three to four hours of spare time daily for five weeks removing the paint from his entire house. This man had used an electric hand sander and worked without a protective mask.³ In the case described in this paper, the patient was a house painter and perhaps he had already had a certain amount of lead in his system. Lead fumes inhaled by the patient while he was using the blow torch may have precipitated the acute poisoning.

All elements of the blood picture have been studied for their possible significance as criteria of lead intoxication. All deviations were found to be non-specific. However, two changes occur with sufficient

frequency to be useful, though not definitive, diagnostic aids. These are: punctate basophilia (or stippling) and reduction in hemoglobin. Stippling, the hematologic change most commonly considered in connection with plumbism, is, like polychromasia, essentially an abnormality in the behavior of the erythrocytes to staining.

SUMMARY

A case of lead poisoning which occurred in a 52 year old house painter has been presented. The diagnosis was suspected when large numbers of stippled red cells were seen in the smear. Abnormal amounts of lead in blood and urine confirmed the diagnosis. The poisoning probably was caused by

the inhalation of lead fumes resulting from the application of a blow torch to painted wood. The outstanding symptoms involved the gastrointestinal tract and these disappeared in two weeks. Medications included: Probanthine, Demerol and saturated solution of Potassium Iodide. The anemia responded to a hematinic.

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Bleeding From The Lower Intestine

Bleeding that occurs proximal to the ligament of Treitz can usually be diagnosed clinically with the help of appropriate studies," says Dr. L. Kracer Ferguson. "Bleeding that comes from sites below the ligament of Treitz is more difficult and at times impossible to localize or diagnose."

There are cases in which even the most thorough search may be unable to reveal the bleeding site in the "lower" intestine. In such a situation the manner in which to proceed to localize the bleeding site is to operate on the patient while the bleeding is taking place.

In a case of active bleeding at surgery, "the upper limit of the blood in the gut is identified by aspiration with a needle and syringe. The bleeding area should be approximately 12 inches above or below this point."

If there is no observable lesion, the gut is opened and intussuscepted cephalad anal caudad.

If no bleeding sites are found, the surgeon should resect approximately 2 feet of intestine—a "blind" resection that includes the stoma through which the gut was explored.

When it is not possible to determine where the blood in the colon is freshest, multiple small colotomies may be performed. The surgeon may determine the general area of the bleeding and perform a "blind" resection in that area. "This seems logical if the area contains many diverticula because of the known association of bleeding and diverticulitis." On the other hand, a transverse colostomy may be undertaken when there is no indication of the bleeding site in cases in which hemorrhage is less massive and the operation is not much of an emergency.

"If blood then appears at the proximal colostomy stoma, the bleeding site in the right colon can be treated by right colonic resection; if blood continues to appear per rectum, the bleeding area must be left in the colon or sigmoid and a left colectomy may be performed. In these cases, the area from which the bleeding comes is resected because it is impossible to discover the bleeding point." (*Surgery* 45:354, February, 1959.)

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A New Theory On The Genesis Of Atherosclerosis

Astrup has shown by electron microscope studies on tagged fibrinogen that the endothelium of arteries is lined by a fibrin sheath which disappears as the blood moves into the smaller vessels. The explanation given for this phenomenon was that fibrin is dissolved in smaller vessels by a tissue substance which converts the plasminogen contained in the fibrin to plasmin which then dissolves the fibrin sheath. As the fibrin is broken up into smaller units the plasmin is liberated but bound by anti-plasmin in blood.

This rapid formation and breakdown of fibrin would require large amounts of fibrinogen and the life of the existing supply should be very short. This in fact was confirmed by Astrup who found that fibrinogen is the most rapidly metabolized protein in the body having a life of but 6 days.

It is intriguing to speculate as to what might happen if the fibrin sheath investing arterial endothelium were not to be broken down. We know that under certain conditions such as wasting diseases, hepatic cirrhosis and some still unknown, this fibrin is not broken down readily and there is a marked tendency to intravascular clotting. Perhaps conditions occur in which more subtle changes take place in the vascular system not readily recognized but nevertheless preventing dissolution of the fibrin sheath. It is not difficult to imagine that in such a case the endothelium might grow over the fibrin, invest it and bring it into the subendothelial region. Here it could conceivably form a plaque at the same time interfering with tissue activators from reaching the intraluminal fibrin. It is this speculation which Astrup employs as a possible explanation for the genesis of atherosclerosis.¹

Recently Shimamoto et al² have reported a method that would regularly induce large myocardial infarct-like lesions in rabbits and rats fed either on a high or low fat diet by injecting polysaccharides of gram negative bacteria and adrenalin or nor-adrenalin. The animals showed a large number of myocardial lesions and remarkable elasto-fibrous thickening of the intima of the coronaries and also the aorta. Apparently the polysaccharide induces precipitation of fibrinogen with clumping of platelets and leucocytes with increase in blood coagulation. This property of bacterial polysaccharides³ seems also to be a common feature of various high molecular substances, not only of bacterial origin but also from animal and plant tissues such as liver glycogen, dextran, Kaolin and antigen-antibody precipitates described earlier by Stetson⁴ and Walton.⁵

It is significant that Shimamoto found the same disease but of much greater severity if he simultaneously treated the animals with adrenaline or nor-adrenaline. In addition the author reports that the lesions were especially severe in the coronary arteries at or near the point of bifurcation, the regions most exposed to intravascular hemodynamic stress. We have here then a method of producing atherosclerosis by preventing the dissolution of the fibrin sheath normally existing in arteries.

Of especial value to clinical medicine in the above findings is that the atherosclerotic lesions resulted from two mechanisms both of which were amenable to medical management. Oral administration of magnesium chloride was shown to partially inhibit the effect of the high molecular substances on the arteries of rabbits. While animals that did not receive adrenalin showed decidedly less vascular disease.

The authors point out that certain diseases can liberate high molecular substances into the blood notably certain infections especially those involving the gastro-intestinal tract, some allergic diseases, injuries, including operations, burns and transfusions. They have also shown that ingestion of such high molecular substances can produce the same kind of arterial disease and myocardial infarction both in animals and man.

What role does hypercholesterolemia play in this drama? It has already been shown^{6,7} that administration of magnesium chloride exercised a preventive effect in hypercholesterolemic animals against atherosclerosis just as it did in Shimamoto's animals. Is it possible that a common denominator exists to account for the atherosclerosis caused both by hypercholesterolemia and that caused by high molecular substances? Can it be the phenomenon uncovered by Astrup that large vessels are normally lined by fibrin sheaths? It is interesting to speculate that both mechanisms apparently unrelated one to the other have this in common—they both tend to produce fibrinogen precipitation in vessels and they are both mitigated by magnesium chloride. Perhaps cholesterol absorption by arteries interferes with the liberation of tissue substances involved in fibrinolysis. Here then is a fertile field for investigation.

Three consequences of this work however would appear to follow logically. One is the mitigating effect of magnesium chloride. Obviously some of the precursors of arterial disease cannot be avoided, but in all conditions in which they may be operating it would appear wise to attempt mitigation by administering magnesium chloride. To be sure these observations are derived from animal experiments and much more work remains to be done to establish the efficacy of this treatment in human

beings. The method however is harmless but its benefits could be great.

The second is that adrenalin and nor-adrenalin can make a mild case severe. Since anxiety, tension, nervous dynamism are states in which pressor amines are liberated, a rationale for dealing with the psyche of individuals is thus made clear.

Finally if precipitation of fibrinogen is involved in the process of developing atherosclerosis, then anti-coagulants which act to prevent precipitation should be considered a valuable adjunct in a patient in whom it is known that clotting has already taken place. It may be presumed that it will continue to do so as long as the mechanism which causes fibrin to remain in vessels is still unknown and therefore at present not removable. Perhaps this is the reason why the mortality rates of patients who have suffered a myocardial infarct is so greatly reduced if they remain on indefinite anti-coagulation therapy.^{8,9}

The fact that we already have clues on the role of adrenalin and a suggestion of a therapeutic agent magnesium chloride to prevent fibrin precipitation caused by high molecular substances as well as hypercholesterolemia affords hope that the solution of the problem of atherosclerosis the present number one killer will not be too long delayed.

L. H. N.

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Laboratory Notes

Transaminase In Liver Disease

Because the enzyme transaminase (SGOT) is liberated from dying cells in many organisms, it is *not* a specific test for myocardial infarction, although it is indeed useful in differential diagnosis of chest pain. It is also elevated in hepatocellular disease, and the highest values recorded have been in massive liver necrosis. In most of these patients the sequence of events is acute cardiac failure—acute anoxia of liver—liver necrosis—transaminase of 2000 units or even higher. Transaminase levels in myocardial infarction, even of great severity, rarely exceeds 200 units. The differing levels are indicative of the much greater amount of hepatic than cardiac tissue which can die in a surviving patient.

Syphilis Tests

When there is reason to believe that a positive serologic test for syphilis is a "false positive," serum is sent to the State Laboratories for further tests. They first perform a TPCF (Treponema pallidum complement fixation) using a purified antigen made from treponemas. If this is negative it is so reported and the presumption is that syphilis has been excluded. If the TPCF is positive it is sent to Chamblee, Georgia for the TPI (Treponema pallidum immobilization) test. This is supposed to be the "last word" in accuracy.

Unfortunately even these more refined tests may give false positives and negatives. One hundred per cent accuracy is not yet possible in serological tests for syphilis.

Reticulocyte Counts

When treating a patient with proven or possible pernicious anemia a reticulocyte count should be done before B₁₂ is given and then daily from the 5th to the 12th day after initiating injections are started. This is a most valuable method of corroborating the diagnosis, of evaluating adequacy of dosage and sometimes of demonstrating that complicating diseases are present.

Reticulocyte counts are also helpful in the work-up of all anemias as an indication of bone marrow responsiveness.

Sex Chromatin Studies

Persons are male if they inherit the small y chromosome from their father and female if they inherit the larger X chromosome. The body cells

of women contain a nuclear mass which seems to be the actual X chromosome and can be seen under oil immersion magnification. Such structures are demonstrable in 10 to 40 per cent of nuclei from women and 0.4 per cent of nuclei from men; the structures in male cells appear to be artefacts. It is essential in studying patients with major abnormalities of the genitalia to make a determination of sex chromatin. If this is done in infancy the child can be reared in its true sex.

A practical method of sex chromatin determination is to process scrapings of oral mucosa by the Papanicolaou technique. Scraping should be done with sufficient vigor to obtain deep epithelial cells with well preserved nuclei.

Prenatal Screening

Studies for the presence of maternal antibodies capable of crossing the placenta and injuring the fetus are of great value to the pediatrician and obstetrician. The commonest (about 90 per cent) and most important of these is the anti-Rh antibody found in Rh-negative women. In order to find as many of the other antibodies as possible it is now feasible to screen *all* pregnant women, Rh positive and negative, with a commercially available mixture of erythrocytes containing almost all the known antigens. These include:

1. Rh-Hr group
Rh₀(D), Rh'(C), Rh''(E), hr'(c), hr''(e), V
2. Kell-Celantano group
K k
3. Duffy group
Fy^a, Fy^b
4. Kidd
Jh^a, Jh^b
5. Lewis
Le^a, Le^b
6. M, N, S, s
7. Ti^a, P, Vel, VT^a, & Rautenberg

Not included are the ABO group for which no good prenatal screening method is now available.

Many of the antibodies so demonstrated can be identified in the hospital laboratory; others must be identified by blood grouping centers. In any event prenatal identification permits selection of proper donors in advance. This is most important if the donor must be of a rare type.

Give the hospital laboratory several weeks advance notice when sensitized mothers are due to deliver!

THE PRESIDENT'S PAGE

THE Special Committee to Continue to Study Prepayment Plans made its report to the House of Delegates on December 11, 1958. Acceptance of the report and adoption of its four recommendations ensued. The first of these recommendations read as follows:

- * (1) That a Special Committee on Relative Value Study be formed to
 - (a) provide the members of the . . . Society with up-to-date and continuing information concerning relative value scales, and
 - (b) draw up a prototype of a relative value scale . . .

Soon after the House of Delegates' meeting in December, your officers held consultations on how best to approach this problem. After due consideration it was decided to call upon the 14 specialty sections to designate representatives who would meet with other interested individuals and representatives in order to develop the groundwork for this undertaking. It is unbelievable, but nevertheless true, that the apathy and procrastination referred to in a previous letter on this page, could still be prevalent in this day of rapid social and economic change as it affects the very life-line of our profession. However, not until the latter part of May was it possible to induce a portion of the defaulting specialty sections to name their appointees, thus permitting the selection of an appropriate sub-committee of the Council to serve as a "steering committee."

This committee will of necessity be tied-in with the labors of a contemplated Opinion Survey. Incidentally, but most opportunely, the AMA Committee on Medical Practices will sponsor a Regional Conference on Relative Value Studies in the New England area in July. Naturally the so-called "steering committee," together with several other closely related committees of our Society, will be expected to participate actively in this conference.

It is not only the present day trend, but also the opinion of many physicians, that relative value studies are definitely needed in each state or region. This is demonstrable in the light of current developments. One very pertinent remark in this sphere was made by Dr. William J. Reals who played a principal role in developing the Kansas plan. He stated, "if we don't make relative value studies of our own, someone else will. It may be done by our friends—but it might also be done by the government."

I have mentioned that this type of study is a present day trend. California, Nebraska, Iowa, Montana and Kansas have for some time utilized relative value scales. Arizona, New Mexico and other states show considerable interest or curiosity. Michigan accepted the California study during a period of need and plans to conduct one of its own. The Health Insurance Council, through a representative, stated that the uniform nomenclature and the relative values in these studies will help insurance companies rearrange their out of date benefit schedules which pay disproportionate amounts for services.

During the past year Connecticut has developed a reputation for its progressive attitude in regard to the physician's role in health care. In the modern concept, this pre-supposes a Relative Value Study of our own. We are fortunate that the work has already been started. May it well succeed.

Ellwood C. Weise, M.D.

CLINICAL MEDICINE

Dr. Vincent J. Collins, Associate Professor in Anesthesia at the N.Y.U.-Bellevue lectured on the "Preoperative Preparation of the Cardiac Patient for Surgery and Anesthesia" at the Norwalk Hospital, Norwalk, Connecticut on March 26, 1959.

He emphasized the importance of the teamwork of the internist, the anesthesiologist, and the surgeon in the preoperative evaluation of the patient. The operative risk is the decision of the anesthesiologist and of the surgeon, and not of the internist. The internist should state that the patient is in optimum physical condition. Three factors are involved in determining the operative risk: the patient factor, the surgical factor, and the anesthesia factor.

The importance of the clinical history is quite obvious in evaluating the patient. Simple bedside tests for evaluation of the cardio-pulmonary function may be done. Normally a person can hold his breath for at least thirty seconds. If unable to do so, the cardio-pulmonary function is definitely impaired. Blowing out a lighted match with the mouth open at a distance of six inches indicates a maximum breathing capacity of at least sixty liters per minute, and a timed vital capacity of more than one and six tenths liters per second.

In the preoperative preparation of the patient, the following aspects are to be considered:

1. Psychologic preparation: Bad psychology enhances apprehension resulting in increased resistance to anesthesia.
2. Sedation: Sedation should be generous but not depressant.
3. Cardiac Balance: Digitalization.
4. Vitamin Balance: Thiamine for cellular respiration.
5. Fluid Balance: Total blood volume, proteins, and electrolytes.
6. Endocrine Balance: Adrenal cortex and role of stress. Steroids should be resumed on patients who previously had been on these medications.

Hypothermia is indicated as an adjunct for some cardiac surgery, vascular neurosurgery, and portal shunts.

SYLVIA G. ROA, M.D.

Acidic Foods And Good Nutrition

Man is noted for his "sweet tooth," a craving which is reflected in our high consumption of candies, ice cream, sweetened baked goods, soft drinks, etc. Man also has a fondness for "tangy" or acidic products as exemplified by various fruits (citrus fruits, pineapple, grapes, cranberries, etc.), pickled

foods, many soft drinks, and certain candies. For years nutritionists have been warning the public about the dangers of an excessive consumption of sweets in (1) fostering a nutritional imbalance and (2) augmenting tooth decay.

Studies at the National Institutes of Health, and several other laboratories have clearly demonstrated that marked tooth damage may result when rats, hamsters, dogs, or monkeys consume acid beverages for even limited periods. Thus a common cola drink (which contained sufficient H_3PO_4 to have a pH of 2.6) caused visible and reproducible molar decalcification in rats within a few days time. A Navy-issue synthetic lemonade, when imbibed by rats for one month, literally dissolved away the lower molars down to the gingivae! Candies having a pH of 2.5 to 2.8 have also been implicated in tooth damage. Acetic acid (vinegar) and other organic acids can also cause erosion, but none is more destructive than citric acid—for here there is both the pH effect and the calcium-solubilizing action of the citrate ion.

Does this mean that orange juice, for example, is bad for a person? Obviously not, for its important contribution to our ascorbic acid needs is well known. It does mean, however, that oranges *can* be detrimental if improperly used so as to keep the juice in relatively prolonged contact with the tooth surfaces with little opportunity for salivary buffering. Thus the widespread practise of athletic coaches in "refreshing" their weary charges by having them bite and suck on sections of orange or lemon jammed against their front teeth is an unfortunate one. This writer has personally observed a young man who, by doing this with an orange or two a day for about two years, succeeded in stripping the enamel and much of the dentine from his incisors and severely pitting his other teeth! These effects are far different from what would result from drinking a glass of orange juice daily, where the juice is not in contact with the teeth more than momentarily.

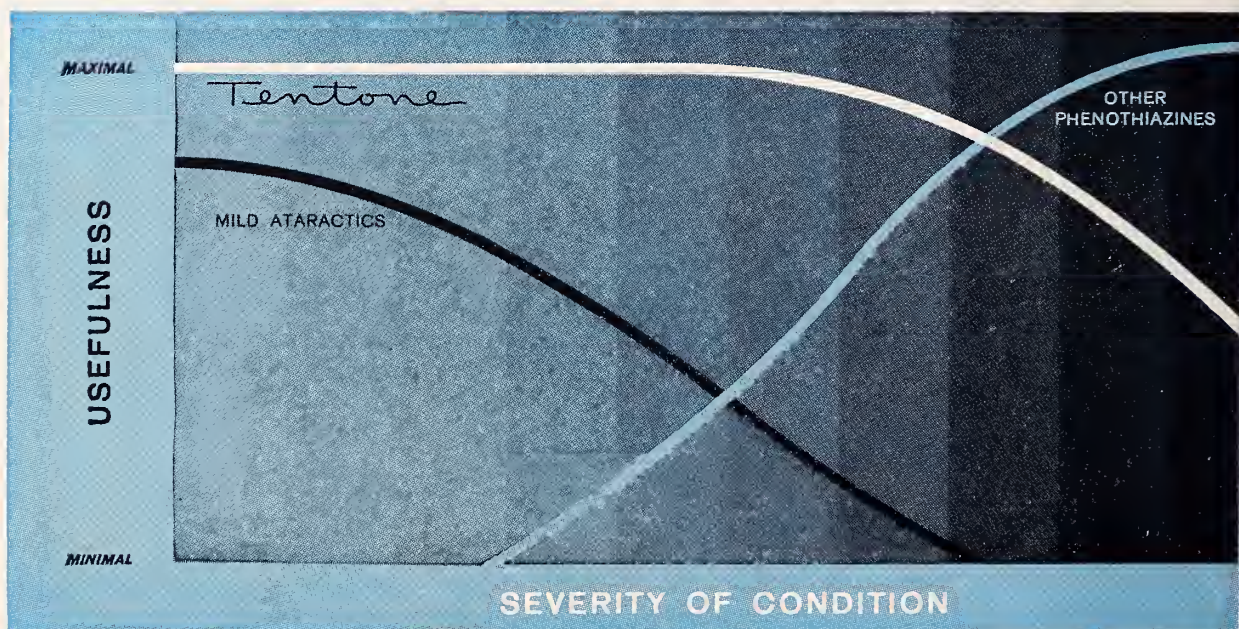
Tasty, but poorly nutritious and often decidedly acidic, products as soft drinks and hard candies can be detrimental if used beyond moderation, and even such nutritionally important foods as the citrus fruits can cause trouble if consumed in an unwise manner.

ROSS A. GORTNER, JR., PH.D.
Professor of Biochemistry
Wesleyan University

This article prepared at the request of and approved by the Subcommittee on Nutrition of the Committee on Public Health of the Connecticut State Medical Society.

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Opinion Survey And Relative Value Study

As a result of actions taken by the House of Delegates in December, 1958 and April 1959, the Society will undertake two projects of major importance during this coming year.

The first of these is to conduct a Relative Value Study for the purpose of strengthening the position of physicians with respect to third party agencies and to modernize the presently antiquated methods of determining schedules of payments for services rendered to the subscribers of prepayment plans, Blue Shield or otherwise.

Members of the Society should attempt to participate in this study with open minds and the fullest cooperation. Third parties are here to stay and there is no question that if doctors themselves do not realistically relate the values of the services they perform, there will be increasing pressures brought to bear to have others assume the task. The "others" may be far less qualified than we are and their decisions are quite likely to be somewhat arbitrary if not completely unreasonable.

It is not the purpose of a relative value study to set fees. Its primary purpose is to establish a relative value scale which will indicate, in various types of practice, what value the doctors who perform the services place on those services in relation to some basic unit of medical care. In general practice or in internal medicine, the unit might be a routine office visit. In surgical fields, it might well be some very minor operative procedure. All services performed in any particular type of practice are then expressed in multiples or equivalents of the basic unit, and a relative value scale has been accomplished. Under this system, the surgeon does not assign values to the internist's services, nor the pediatrician to those rendered by the radiologist. A service is given a rating *only* by doctors who regularly render it in their practices.

It is true, of course, that when a dollar value is given to the basic unit, the scale is converted into a payment schedule. But the method used in conducting such a study is designed to determine the median *fee* usually and customarily charged by a majority of doctors in a county or state and, therefore, a *payment* which could be accepted as "reasonable" by that majority. It is almost a foregone conclusion that there will always be a small

number of physicians who will refuse to permit any one other than themselves to limit their charges in any way, but it has been rather conclusively demonstrated elsewhere that the fate of the private practice of medicine must be placed in the hands of the majority, not the minority.

The second project, an opinion survey, is of equal importance and quite intimately related to the first. If the Society is to give proper representation to its members, the officers and committees of the Society must earnestly attempt to learn what medical policies the members wish to be promulgated in their behalf. Having worked out the details of the relative value scale, its implementation in respect to Blue Shield and private insurance carriers must be based on the opinions of those whose services are to be "sold"—the doctors of Connecticut. These must be the opinions of *all* members of the Society; not merely those of the specialty groups or other small segments of the whole. The views of the practitioner who serves a sparsely settled rural area must be given the same careful consideration as those of his city colleagues.

It is to be fervently hoped that when the several responsible committees have completed their work and the questionnaires are finally received by our more than 3,200 members, each one will cooperate to the fullest in the matter of his participation. Without such cooperation, money will be wasted to be sure, but the setback to the cause of preserving the private practice of medicine may be much greater than can be measured in dollars.

WILLIAM R. RICHARDS, M.D.
Executive Secretary

Foods And Drugs

Through an oversight on the part of the Secretary, the following Report of the "Sub-committee to Meet With the Commissioner of Food and Drugs" has not been published in the Journal, as voted by the Council on May 28, 1958.

Since the subject matter of the report is still of considerable importance to all members of the Society, it is belatedly submitted herewith.

Complaints from pharmacists that many physicians fail to cooperate with them in obeying the laws regarding the filling of prescriptions has caused Food and Drug Commissioner Attilio Fras-

sinelli to appeal to the Society to aid in securing a better observance of the statutes by all members of the medical profession.

The Council of the Society named the following as a sub-committee to investigate and assist the Food and Drug Commission solve the problem: Drs. Norman Gardner of East Hampton, chairman; Ralph Gilman of Storrs and Royal A. Meyers of Watertown.

The situation is this:

Subsection (k) of Sec. 3944 of the General Statutes as amended by Sec. 2096d of the 1955 Supplement and Public Act 104, passed by the 1957 General Assembly, provides that "a drug or device shall be deemed to be misbranded—if it shall be a drug sold at retail for use by man and shall contain any quantity of amidopyrine, barbituric acid, cinchophen, bishydroxycoumarin, dinitrophenol, methylparafynol, thiouracil or thyroid, or any derivative of any of these substances, or (1) is a habit-forming drug to which subsection (d) of this section applies; or (2) because of its toxicity or other potentiality for harmful effect, or the method of its use, or the collateral measures necessary to its use, is not safe for use except under the supervision of a practitioner licensed by law to administer such drug; or (3) is limited by an effective application under section 3946 to use under the professional supervision of a practitioner licensed by law to administer such drug, unless it shall be sold on a written or oral prescription of a practitioner licensed by law to administer such drug, and its label shall bear the name and place of business of the seller, the serial number and date of such prescription and the name of such practitioner."

It will be noted that the prescription must be that of the practitioner licensed by law to administer such drug and further that no prescription for any of the drugs covered in this subsection can be refilled except on the written or oral order of the practitioner. No proviso is made that such a prescription or order for refill can be made by an agent of the practitioner, no matter what his or her capacity, whether it be nurse, office attendant or, as reported in one case, his wife.

Despite the plain language of this section the Food and Drug Commission receives repeated complaints that many physicians are delegating powers and privileges to girls in their offices although they have no authority to do so. When a pharmacist fills such a prescription or order from an unauthorized individual, he is performing an illegal act.

A recent complaint reported that when a pharmacist refused to make an over-the-counter sale of thyroid tablets and advised the customer to get a prescription from a physician, the man left and re-

turned in about 15 minutes with thyroid tablets which the physician's wife had given him in the doctor's absence.

In another case, the physician had—at the time of the complaint—been in Florida for two weeks. In his absence his office nurse was conducting his office and, among other things, ordering the refilling of some of his prescriptions.

Such practice by physicians places the pharmacist in a difficult position. Even though he knows the physician is away, he hesitates to refuse the nurse for fear the physician will direct his patients to other drug stores. He is, however, violating the law in accepting such prescription refill orders and is subject to a maximum penalty of a \$500 fine and/or six months in jail. In addition the pharmacist must take full responsibility if anything goes wrong should the physician deny he ordered the refilling.

Admittedly it is a nuisance for the busy physician to talk to the pharmacist every time he wants a prescription refilled. He could, however, avoid this by indicating his wishes on the original prescription, i.e. how many times he wants it refilled or is it non-refillable.

While the law quoted was designed for the protection of the people, it also serves the useful purpose of keeping the control of the patient in the hands of the physician where we believe it belongs. It must, however, be observed by all concerned. When it breaks down as in the cases quoted, it leads to widespread violations which can be most serious.

Annual Meeting Of The Council

Thursday, May 14, 1959 — 2:30 P.M.

The annual meeting of the Council was held on May 14, 1959 in the Society's building at 160 St. Ronan Street, New Haven. Since this was the first meeting of the Council following the annual meeting of the House of Delegates, the organization of the Council for the coming year was the first matter of business. The call to order was made at 2:30 P.M. by Ellwood C. Weise, Sr. of Bridgeport, the President of the Society, who acted as Chairman Pro Tem. Dr. Weise expressed some thoughts as to the problems and projects which face the Council in the months to come and also gave a brief description of his experiences as delegate to the Medical Society of the State of New York at its recent annual meeting, stating that their problems seem to be very similar to ours and that he had been informed of a desire that there be liaison established between the medical societies of New York and Connecticut.

Following these remarks, Dr. Weise introduced the new members of the Council and those who

had assumed new posts since the last meeting. Present were, in addition to the President: Drs. Gallivan, Goldberg, Richards, O'Connor, Cullen, Feeney, Scully, Davis, Gens, Cornwell, Kennedy, Blodinger, Murray, Gilman, Buckley, Eddy, Pollock, Grendon, Gardner, Rentsch, Phillips and Chartier. Absent were: Drs. Carter, Schiavetti and Metcalf.

Dr. Weise then declared the floor open for nominations for Chairman of the Council to serve during 1959-1960. The name of Thomas M. Feeney of Hartford was placed in nomination. There were no other nominations and it was VOTED to close the nominations. It was further VOTED that Dr. Feeney's election be unanimous. Dr. Weise then retired and Dr. Feeney assumed the chair.

In his opening remarks, Dr. Feeney commended Dr. Weise for his excellent performance as toastmaster at the AMA-sponsored National Science Fair held at Hartford on May 7, 1959 and also informed the Council that Dr. Louis Orr, President-elect of the AMA, had also made a very impressive speech at that event. On recommendation of the President and the Chairman, the Council VOTED that the Executive Secretary send an expression of appreciation and commendation, on behalf of the Society, to Dr. Orr in recognition of the excellence of his presentation.

ACCEPTANCE OF MINUTES

The minutes of the meeting of April 22, 1959 were accepted as printed.

COMMITTEE ON HEALTH CAREERS

Bernard F. Mann, Jr., Chairman of the Committee on Health Careers, joined the Council by invitation for the purpose of outlining the work of his committee and to request funds with which to operate during the rest of the current year. Dr. Mann described the activities undertaken to date in both private and public schools and stated that the response to the program has been gratifying. It was VOTED to appropriate the sum of \$500 with which to conduct the current business of the committee, it being understood that a budget will be submitted in the Fall for consideration by the Budget Committee. It was further VOTED to commend the Health Careers Committee on the excellent beginning it has made in stimulating interest among young people in medical science and its allied and supporting fields.

It was VOTED to accept the resignation of Arnold H. Janzen, Hartford, from the Committee on Health Careers and it was VOTED to appoint Daniel A. Lopresti, Hartford to replace Dr. Janzen, and to appoint James C. Niederman, New Haven as an additional member of the committee.

CMS

Dr. Blodinger, one of our CMS Directors, reported that attempts were being made to improve the type of advertising programs put on by CMS and showed the Council a proposed advertisement relative to the Special Individual Contract. The layout stressed the part played by physicians in this program and quoted from the recent resolution of the House of Delegates relative to Care of the Aging. There was general agreement by the Council that this constituted a great improvement over previous advertisements and it was VOTED to approve the sample presented.

Dr. Blodinger also reported that the Board of Directors and the Medical Advisory Board were starting to investigate the development of a contract which would provide extended coverage and probably major medical coverage; that for the present, this plan was being considered without specific reference to service benefit levels, schedules of payment, etc.; that efforts were being made to obtain information concerning the median income of Connecticut families from sources which would be mutually agreeable to the Society and to CMS. Dr. Weise pointed out that these figures would be made available through the U. S. Department of Commerce sometime in August.

After some discussion of the problems which would be encountered in conducting an opinion survey as well as a relative value study, it was VOTED that the Chairman appoint a sub-committee of five members of the Council to act as a "steering committee" in the development of a plan of action by which to conduct these two projects simultaneously. It is understood that this sub-committee will work closely with the Committee on Third Party Payments, the Committee on Relative Value Study and others in carrying out its assignment. The Chairman appointed the following to serve on this sub-committee: William R. Richards, New Haven, Chairman, Norman H. Gardner, East Hampton, Denis S. O'Connor, New Haven, Phillip M. Cornwell, Hartford, David A. Grendon, Sharon, and Ellwood C. Weise, Bridgeport, Special Consultant.

COMMITTEE ON RELATIVE VALUE STUDY

The list of representatives of the Sections to the relative value study was reviewed and it was noted that several types of practice still had no representation on this committee: i.e., Medicine, Surgery, Pediatrics, Eye, Ear, Nose and Throat, and Obstetrics and Gynecology. It was VOTED that the following members of the Society and such other representatives as the Chairman of the Council may deem necessary, be officially appointed "The Committee on Relative Value Study." It is to be noted that prior to this action, this group constituted an

ad hoc committee whose assignment was only to develop a general method of approach to the problem: Anesthesia—Leopold M. Trifari, Hamden, Aviation Medicine—William B. Smith, Wethersfield, Dermatology-Syphilology — Cleveland R. Denton, Hartford, Gastro-Enterology—Stewart P. Seigle, Hartford, Industrial Medicine—Harold P. Stetson, Southington, Orthopedic—Earl J. Rhoades, New Haven, Pathology—Ralph E. Kendall, Hartford, Physical Medicine—Lee B. Greene, Bridgeport, Proctology—Angelo Gentile, New Haven, Psychiatry—Maxwell Pasternak, New Haven, Radiology—Arnold H. Janzen, Hartford, Urology—Harry C. Newman, New Haven.

The Chairman appointed the following: for Eye, Ear, Nose and Throat—Charles A. Tucker, Hartford; for Obstetrics and Gynecology—Donald J. McCrann, Hartford; and Benjamin D. Thaw, Hartford as Chairman. The Chairman directed the Executive Secretary to request from the Connecticut Society of American Board Surgeons, the Conn. Society of American Board Internists and the Hezekiah Beardsley Pediatric Club, a representative to complete the Committee.

REVIEW OF SUB-COMMITTEES

A review was made of the sub-committees of the Council. It was VOTED to take the following actions regarding these several sub-committees:

CMS Liaison Sub-committee: that the Chairman appoint the members of this sub-committee for 1959-1960. The Chairman appointed the following: Thomas M. Feeney, Ellwood C. Weise, Sr., John N. Gallivan, Jachin B. Davis, Maxon H. Eddy, Willard E. Buckley, James R. Cullen, William R. Richards, Ex-officio.

Sub-committee to Study and Revise the By-laws: that the Chairman appoint the members of this sub-committee for 1959-1960. The Chairman appointed the following: John P. Gens, Chairman, Ralph L. Gilman and Michael R. Scully.

Sub-committee to Meet with the Commissioner of Food and Drugs: that this sub-committee be discharged.

Sub-committee to Study Organization and Operation of the Journal: that this sub-committee be discharged.

COUNCIL OF THE NEW ENGLAND STATE MEDICAL SOCIETIES

A report was made by Ralph T. Ogden, Hartford, on the 14th Annual Meeting of the Council of the New England State Medical Societies on April 19, 1959. The following matters were discussed at some length and acted upon as indicated:

The N.E. Council would like to broaden its activities and the representation from the component state societies. It would like the state society presi-

dents, executive secretaries and AMA delegates to attend meetings so that there could be a greater exchange of ideas and discussion of mutual problems and projects.

The annual contribution by the component societies has been increased from \$100 to \$150, beginning 1960-1961, by vote of the representatives present and approval of this increase is requested by the Connecticut State Medical Society Council. It was VOTED to approve payment of the increased annual contribution of \$150, starting in 1960-1961.

Although the idea of a New England Medical Association has been put aside for the present, Dr. Ogden was appointed a member of a committee to study the New England Council's by-laws in reference to the possible formation of a New England Medical Association sometime in the future, as well as other matters relating to the New England Council's operations.

The New England Council was requested to hold a meeting on July 18, 1959 with representatives of the AMA Committee on Medical Practices for the purpose of discussing such matters as Relative Value Studies in reference to the New England medical societies. There was uncertainty as to what body would underwrite the expense of such a meeting; some thought the AMA might do so but this is not certain. It is requested that responsible representatives from the Connecticut State Medical Society be appointed to attend this meeting, as well as a representative from Blue Shield (CMS).

It was VOTED that the Secretary prepare a list of members of our Society who would be interested in such a meeting and to invite those members to attend. A letter from the AMA Committee on Medical Practices indicates that this Regional Meeting will be held at the New Ocean House, Swampscott, Massachusetts on Saturday, July 18, 1959.

It was reported that M. David Deren of Bridgeport, Chairman of the Committee on Insurance and Medical Economics, had been unanimously appointed as Chairman of the New England Council's Committee on Investments.

In his letter, dated April 20, 1959, Dr. Ogden requested that the Connecticut State Medical Society Council appoint someone else to represent the Society in the coming year. It was VOTED to accept Dr. Ogden's resignation as Delegate to the New England Council and it was further VOTED to appoint Ellwood C. Weise, Sr., Bridgeport, to complete Dr. Ogden's unexpired term in this post.

COMMITTEE ON AGING

It was VOTED to appropriate such additional funds to the budget of the Committee on Aging as to permit a member, James R. Miller, to attend a meeting of the Joint Council to Improve the Health

Care of the Aged to be held in Washington, D. C., June 12-14, 1959.

SEVENTH ANNUAL CONFERENCE ON PHYSICIANS AND SCHOOLS

It was VOTED to table action on the question of whether or not to have the Society officially represented at the Seventh Annual Conference of Physicians and Schools, to be held in Highland Park, Illinois on October 13-15, 1959.

SILVER HILL FOUNDATION SEMINAR

It was VOTED to table action on a request from Dr. William B. Terhune that the Society participate in the development of a seminar program of the Silver Hill Foundation for the purpose of orienting non-psychiatrist physicians in "the simple techniques of dealing with psychiatric patients in their offices."

STUDENT LOAN FUND SUB-COMMITTEE

It was VOTED that the Chairman appoint a committee of three members of the Council to consider and act upon a request for a loan to an intern of \$500 under the provisions of a House of Delegates action on a "Student Loan Fund," dated December 8, 1955. The Chairman appointed the following: Thomas M. Feeney, Denis S. O'Connor, William R. Richards.

RESIGNATION OF PENSION COMMITTEE

It was VOTED to accept the resignation of Edward J. Ottenheimer, Willimantic, from the Pension Committee and it was further VOTED that the Chairman appoint a member to replace Dr. Ottenheimer on this committee. The Chairman named Samuel B. Rentsch, Derby, to serve on the Pension Committee.

THREE RESOLUTIONS

The Council received as information a report on the results of a poll of its members taken by the East Hartford Medical Society on the three questions of "Free Choice," "Closed Panel Systems" and "Care of the Aging." Of the 31 members polled, responses were received from 20 members. The majority of these responses were signed. For your information, the results were as follows: 16 members approved all three resolutions. Two voted only on resolution 1, approving it. One voted approval for resolution 1 and 3, and disapproval for resolution 2. One omitted resolution 1, disapproved 2 and approved 3."

WELFARE PATIENT'S PRESCRIPTION BLANKS

(A) The Council received the following communication from the Advisory Committee to the Commissioners of Welfare and of Finance and Control: "TO THE COUNCIL OF THE CONNECTICUT STATE MEDICAL SOCIETY: At a meeting

of the Medical Advisory Committee to the Commissioners of Welfare and of Finance and Control held in New Haven on May 13, 1959, the following recommendations were agreed on to forward to the Commissioner of Welfare:

1. The use of the new prescription form W-506 is optional. If it is not used, the doctor will make a duplicate of his own prescription. This is necessary, because the druggist must forward the original prescription to the Welfare Department with his bill for payment. The Commissioner of Welfare requires a signature of the doctor on each prescription.

2. In the matter of re-fills, prescriptions may be phoned to the druggist for re-fills as long as they are followed by the duplicate prescriptions or the 506 forms.

3. In chronic conditions, drugs may be prescribed up to a 90-day period.

4. As has been the practice since 1954, when drugs and medicines have been prescribed and administered over a long period, their use should be continuously re-appraised to determine their effectiveness and the advisability of continuing their further use.

The subject of vitamins was discussed and also the decision on a change in the billing form. The latter two subjects will be taken up at the next meeting of the committee." signed, Edwin R. Connors, M.D.

It was VOTED that these recommendations be referred for action to the governing bodies of the eight county medical associations, since several of the county associations had initiated the protest against this policy by adopting resolutions in this regard. It is understood that action by the counties on these recommendations should be taken without delay.

It was further VOTED that the Advisory Committee be requested to ascertain from the Commissioner of Welfare what action has been taken on Welfare Department Forms 500 and 501 in the matter of revision of these forms.

(B) It was VOTED to receive as information a resolution from the Litchfield County Medical Association protesting the recently instituted policy of the Department of Welfare regarding the prescribing of drugs by physicians to patients receiving welfare benefits.

It was further VOTED to receive as information a second resolution from the Litchfield Association regarding the employment of a legislative agent (lobbyist) by the Society. It was pointed out that the General Manager would act in this capacity in the future.

RESOLUTION RE COST OF LIVING

A resolution was presented to the Council by Denis S. O'Connor, New Haven, Managing Editor of the Journal, which reads as follows:

"Whereas, the Department of Labor in reporting on the cost of living refers to hospital, nursing and therapeutic cost as medical costs, and

Whereas, the term medical costs has become fixed in the public mind as the cost of doctors' services, and

Whereas, much of the unfavorable public attitude toward the medical profession is based upon this misinformation and unfair interpretation, therefore

Be it resolved: The Council of the Connecticut State Medical Society hereby instructs its delegates to the American Medical Association to request the House of Delegates of the American Medical Association to transmit its disapproval of this practice to the Department of Labor and request that reports from that department on the cost of living be clarified to show the true elements of cost of medical care."

It was VOTED unanimously to adopt this resolution.

RESOLUTION FROM COMMITTEE ON PUBLIC HEALTH RE
GOVERNOR'S COMMITTEE ON CHILDREN AND YOUTH

The Council reconsidered a resolution originally submitted by J. Harold Root, relative to the Health Committee of the Governor's Committee on Children and Youth for the 1960 White House Conference. After reviewing all correspondence on this resolution, it was VOTED to adopt the resolution with the deletion of the item titled, "Hospitals as Regional Health Centers." This resolution was presented in full under the minutes of the Council meeting of April 22, 1959.

APPOINTMENT TO SCHOLARSHIP FUND COMMITTEE OF
THE NATIONAL FOUNDATION

A belated request from the National Foundation for the submission of the names of three members of the Society to the National Foundation was received. With the understanding that one of the three will be elected to the Foundation's Scholarship Fund Committee, it was VOTED that the President, Dr. Weise, designate the three members to be recommended for consideration by the Foundation. Due to the illness of Dr. Weise, the Chairman appointed Clyde L. Deming, New Haven, for this post since due to the shortness of time, the Foundation subsequently requested that only one name be presented.

APPOINTMENT TO STATE BLOOD BANK COMMITTEE

On request of the State Blood Bank Committee, it was VOTED to appoint Richard E. Nicholson, Hartford, as a member of that committee.

CONTRACT FOR GENERAL MANAGER

It was VOTED to approve the payment of legal fees relating to the drawing up of the contract of the General Manager in the amount of \$400.

It was VOTED to make the effective date of the contract of the General Manager May 1, 1959.

STAFF BONUSES

It was VOTED that usual bonuses may be awarded to such employees as may be appropriate in recognition of their special efforts on behalf of the Annual Meeting, not including the executive staff.

DUES EXEMPTION

It was VOTED to approve remission of dues for Gordon J. Gilbert, New Haven County, from July 1, 1959 to June 30, 1960, for postgraduate education.

DATE OF NEXT MEETING

It was VOTED that the next meeting of the Council will be held on Wednesday, June 17, 1959.
W.R.R.

MEETINGS HELD IN JUNE

- 3 Joint Study Committee on Staphylococcal Infections
- Advisory Committee on Nutrition to Committee on Public Health
- 9 Conference Committee with State Dental Association
- 11 Committee on Public Health
- 17 Council
- 24 Sub-committee on Opinion Survey
- 29 Committee on Postgraduate Education



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Special Article

The Yale-New Haven Medical Center

GEORGE S. STEVENSON

*President of Grace-New Haven
Community Hospital*

The formation of the Yale-New Haven Medical Center is a matter of historical importance to the medical profession of the State. This exposition of the factors making this new organization desirable is presented in order that the doctors of the State may clearly understand what the medical center is and its relation to the Yale University and to the New Haven Hospital.—The Editor.

IN October of 1958 there came into organized being The Yale-New Haven Medical Center, Incorporated. The incorporators were Frederick H. Wiggin, Dr. Vernon W. Lippard, Dean of the Yale School of Medicine, and Dr. Albert W. Snoke, Director of Grace-New Haven Community Hospital.

In due course a board of directors was chosen, consisting of Dr. Lippard, Dr. Snoke, George S. Stevenson, President of the Hospital, Charles S. Gage, Treasurer of Yale University, Paul M. Zorn, Vice President of the Hospital, and Charles M. O'Hearn, Assistant to the President of Yale.

In the articles of incorporation the purposes were described in this language: "The purposes, objects and powers of this corporation are and shall be solely and exclusively to act as an agent of the Grace-New Haven Community Hospital and of Yale University, and as such to solicit and receive subscriptions and gifts from individuals and members of the public and from corporations for the exclusively charitable purposes of the Grace-New Haven Community Hospital . . . and the exclusively charitable purposes of Yale University . . . and in connection with gifts to Yale University especially to promote the charitable, educational purposes, objects and activities of such University's School of Medicine. . ."

This statement was supplemented and given emphasis in the by-laws by a paragraph reading as follows: "The efforts of this corporation and its material resources shall be used to improve and advance the protection and restoration of health by strengthening the teaching, research, and patient care functions of the Yale School of Medicine and the hospital and their related activities."

The function is plain. It is to assist—not to administer, except in limited areas of action. The corporation will not be concerned directly with operation. It will refrain from participation in activities already assigned to others. Thus there will be continued the time-tested arrangement under which each of the two institutions controls its own functions, in mutual understanding and with daily, even hourly, accommodation by each to the needs of the other. The corporation will not be a supergovernment. It will not hold funds or property. Its interest will be centered on giving all the help it can to the furtherance of three main objectives: (1) Longrange overall planning; (2) the promotion of wide public understanding; and (3) the solicitation, acceptance, and allocation of benefactions in accordance with the wishes and instructions of the donors. In category (3) it is expected that its efforts in the immediate future will be directed primarily toward obtaining funds for capital improvements and establishing a substantial endowment for the support of the University Hospital programs for the Grace-New Haven Hospital.

The corporation thus takes a recognized and important place as the vehicle for strengthening the intermeshed activities of the hospital and the school of medicine. These are easily identified when we realize that the Grace-New Haven Hospital has two broad functions: that of a community hospital serving the needs of the New Haven area, and that of a university hospital staffed by the clinical departments of the Yale School of Medicine.

It is the University Hospital program that serves the medical profession and an increasing number of patients throughout the state. It is this phase of

the hospital's activities which requires extensive support if the clinical departments are to have the necessary facilities to undertake the developmental aspects of medicine, applying the discoveries of the laboratory to the care of patients. In this development phase new treatments are refined and improved, and doctors and nurses trained in their use.

This is an expensive process for it often requires construction, the purchase of complicated equipment, and funds for those patients who cannot meet the extraordinary cost of this kind of care. The support of this aspect of our University Hospital program will be the principal concern of the Yale-New Haven Medical Center. Recent developments have given this program a new and impressive significance which calls for action on a broader front than ever before. I shall return to this theme later.

Now we go back a century and a half. What is now named the School of Medicine of Yale University (first called The Medical Institution of Yale College) was established in 1810, during the presidency of Timothy Dwight. It was the first of Yale's professional schools, and one of the first schools of medicine in the United States.

If we put our minds back to those days we can see that there were stirrings in the Connecticut air, and there were men of action who responded. In 1826 ten men of New Haven sought and obtained from the general assembly a charter for what they named The General Hospital Society of Connecticut, (commonly known as the New Haven Hospital until its consolidation with Grace Hospital in 1945). It was the first general hospital in the State, and one of the first in the Nation, being preceded only by similar institutions in New York, Boston, and Philadelphia.

Of the ten men four were professors in the school of medicine, one was professor of chemistry, mineralogy and geology in the college (the first Silliman), four were local practitioners, and one was a layman (William Leffingwell, a former New York shipping man).

Just then and just there, we may say, The Yale-New Haven Medical Center was born. For these men made plain their vision of an institution devoted to the Hippocratic trinity of Healing, Teaching, and Research. Their immediate concern was the care of the sick of the present and the training of young men to take care for the sick of the future. To fortify the undertaking in its crucial early stages they pledged ten per cent of their professional incomes for five years, or one hundred dollars a year each, whichever amount should be greater.

We now hasten to record another fact that should be kept ever bright in our annals. It is the part played by the Connecticut State Medical So-

ciety in the establishment of the General Hospital Society of Connecticut.

For many years the Medical Society had been advocating the creation of a general hospital. The members favored a location near the recently established medical institution. Thus it became inevitable that, when the time came to act, the New Haven doctors, as members of the Society, should accept the main responsibility for carrying out the plan. Their own impulses would probably have been sufficient, but fortunately the medical climate in the State gave them sanction and encouragement.

Upon incorporation, the first need was money for land and a building. The general assembly appropriated \$5,000, but the rest had to be patiently gleaned from private fields. Finally enough money was on hand or in sight to justify going ahead. Twelve acres were purchased on the eminence where the Hospital now stands (four and a half were later sold for an amount greater than the cost of the whole). The distinguished Ithiel Town was chosen as architect. The building was worthily constructed, of red sandstone. It was opened in 1833, with seventy-five beds, of which not all were filled for more than a decade.

The years that intervened before the opening of our own century are not important to our present discussion. They saw the fruits of the steady, devoted efforts of medical men who kept the faith and of laymen who gave them understanding and support. On the world scene there were the epochal discoveries of Pasteur, Koch, Lister, and various other men of superb genius in Europe. In our own country, in 1846, was the introduction of merciful anaesthesia; and toward the end of the century the profound influence upon medical practice and teaching of William H. Welch (born in our own Norfolk).

In the early 1900's there burst forth a medical renaissance of historic proportions. The years before had served to incubate it. Our own years have seen the full surge and power of the flood tide that then set in. The enormous advances in medical knowledge and the application of it that followed have been accompanied by corresponding progress in medical education.

In 1910 the Carnegie Foundation for the Advancement of Teaching issued the Flexner report on Medical Education in the United States and Canada. Its effects were profound. But, for balanced perspective, we must think of it primarily as the marshaling, brilliantly done, of facts so generally known and convictions so widely held as not to be denied expression. As a part of all this let us not forget the great role accepted by the American Medical Association, particularly its valiant

and effective campaign against the hideous "diploma mills."

During this period the Yale Corporation, in sensitive and courageous response, rose to the full heights of its responsibility and opportunities. It determined to put the School of Medicine in a position where it would have no superior. Essential to this plan would be an association with a hospital of superior quality. This meant providing for the New Haven Hospital the very large sums not otherwise available.

The dimensions of these funds will be seen from a 1953 appraisal of the Hospital buildings. The total came to \$23,000,000 (round figures). Of this, \$13,000,000 had come from Yale sources, and \$10,000,000 from others. Of the latter amount \$5,844,000 was realized from the two public campaigns of 1945 and 1950. These two campaigns represented the first large-scale contributions made to the Hospital by the community. Since 1953 the University has added the Harkness dormitory for medical students, costing \$2,750,000, an addition to Sterling Hall of Medicine costing \$1,000,000, and about one-half of the \$1,100,000 cost of the Hunter Radiation Therapy Center. Furthermore, Yale gave land valued at \$382,000 as part of the site for the Memorial Unit. Of similar significance is the fact that during the period 1920-47 cash grants by the University to cover operating deficits totaled more than \$4,000,000. In one three-year period, 1944-7, the total exceeded \$600,000.

Such a situation could not go on indefinitely. The University could find no justification for continuing to use educational funds to care for the sick of New Haven, and the conscience of the Hospital was not easy. In 1947, after long deliberation and protracted exchanges of thought, it was agreed that the only solution was for the Hospital to stand up to its responsibility for providing patient care and for the School of Medicine to carry the burden of teaching and research. To the extent that teaching and research add to the costs of hospital operation, cross-accounting is continuously kept and the University pays its debits on balance.

Now we are ready to deal more directly with the concept of the Medical Center. Reason as you will, plan as you will, you have to start with the controlling reality of the interdependence of the two institutions. You may stray from that fact, but you will always come back to it.

How can that concept of interdependence be made a living, functional thing? I reply: In the day's work.

It is not a paradox to describe the day's work as both simple and highly complex. It is simple when looked upon as the pursuit of two controlling purposes: the care of the patient, and the medical training of young men and women. The former

is the aim of the Hospital, the latter of the School of Medicine.

Complexity sets in with the distribution of the details of performance. While the duties of the individual are defined as clearly as possible, it is inevitable that most of the tasks overlap.

Adding together the private practitioners and the Faculty of the School we find that more than 600 highly trained professionals are involved. Each of them is important and each is a person of independent thinking and of strength of character. It is fundamental to good administration that an atmosphere be maintained in which they can all work together with mutual understanding and untroubled minds. To move steadily toward the full attainment of that objective is the hourly task of administration. This requires, first of all, a solidarity of understanding and a disposition to respect it in all the particulars of the day's work. It creates a practical situation to be met practically.

It is surprising how many problems have their solution in the give and take of doing them, rather than in conversations about how they should be done. I leave this aspect of our affairs by expressing my admiration for the effectiveness with which all our men and women work together to get our tasks performed.

No less important than the sum of all these activities is the contribution the School of Medicine and the Hospital jointly are making to assure a future supply of highly trained doctors wherever the need is greatest both in this country and throughout the world. The present students come from 45 states and 23 foreign countries.

Now we proceed to the broad policies that govern the operations of the Medical Center as a working partnership of the Hospital and the School of Medicine. The compatibility of the two groups has become so firmly established over the years as to be taken for granted. It rests upon the plain understanding that neither will be called upon to surrender any part of its own governance or to depart in any respect from the basic purposes of its creation.

One feature of the operations of the Center is all but unique among institutions of its type. Nearly all university teaching hospitals are so located that they can leave to other neighboring institutions the major part of community responsibilities. With us it is different. Tradition has laid upon us the duty, and given us the privilege, of being the chief instrumentality for meeting the needs of the community whatever may be the volume or the circumstances.

In all this we put our first thought upon how we can most effectively cooperate with the private practitioners, who are the bulwark of the health of

the people. To this end the Hospital believes that its close association with a great medical school has a value beyond estimate. We have instantly available for every special case the specialized services of a medical faculty numbering 250, of whom many have a world-wide reputation. And we aim to have all the necessary special equipment.

We have found that most private practitioners not only have use for these special assistances, but find satisfaction in frequent contacts with their counterparts in the academic world. By the same token the academic men are stimulated and helped by association with their colleagues in active practice. The medical profession leads all other callings in the desire of its members to be of mutual help by the exchange of information and experiences.

And the Hospital itself in getting its work done is powerfully assisted by the manpower supplied by the School, particularly in the outpatient departments. And there are countless ways in which this manpower assists at the bedside.

The substantial advances that our Hospital has latterly been able to make in patient care can be directly traced to its association with the School of Medicine, whose Faculty has often shown the way to new things and cooperated in carrying them out. Examples are rooming-in, preparation for childbirth, more flexible care for children on the pediatric floors and a greater understanding of their parents, the astonishing advances in cardiac surgery, particularly the open-heart operation. This single procedure requires a team of more than twenty, drawn from both the School and the Hospital.

A striking proof of the power of pure research, as conducted by the School, is given by the case of a member of the faculty of a distant medical school, who came to us as a patient a few months ago. His prolonged fever had baffled his colleagues and the staffs of other hospitals. After the more obvious causes of his fever had been ruled out it was discovered that he was suffering from an unusual metabolic disorder that had been the subject of investigation, on a purely theoretical basis, in one of our laboratories. This illustrates the effectiveness of the integration of the skills of researchers and practitioners working together.

We note, too, the hopes and possibilities that lie in our concentrated study of cancer. Whether or not the critical discovery is made here, one thing is certain—that discovery will have been based to some extent on work that has gone forward in New Haven. Recently through the efforts of individuals connected with both the School and the Hospital we have established the Hunter Radiation Therapy Center for the diagnosis and treatment of cancer,

with a two million volt machine, and all the appurtenances and working spaces. With this equipment to help them our researchers and clinicians will go forward. They already rank as one of the most important groups, not only in the Nation but throughout the world, in pressing an unrelenting attack upon an unrelenting foe.

Lack of space forbids more than the bare mention of a multitude of other vital matters engaging the active attention of the School's 250 full-time salaried faculty. They and their students are engaged in projects that will affect the health and happiness of untold millions of people. Their standing in the world of investigative medicine is indicated by the fact that of the fifteen scientists recently honored for work on poliomyelitis, selected from all over the world, two were members of the Yale faculty and two others were graduates. Much of the knowledge of vitamins and nutritional deficiencies originated here. Studies in the Laboratory of Physiology have led to major discoveries in the fields of neurophysiology and endocrinology. Uncounted numbers of people now living would have died from infantile diarrhea and postoperative shock but for research at Yale on the metabolism of water and electrolytes. The first clinical employment of penicillin was achieved here in New Haven in 1942.

This is the proper point at which to pay tribute to Grace Hospital and its record. Established in 1886, it attained distinction by the stature of its doctors, the excellence of its nursing staff, and the quality of the care it bestowed upon its patients. For fifty years it served the medical needs of New Haven powerfully. It is no less effective now as a component of Grace-New Haven. In the 1930's, like the New Haven Hospital, it found itself faced with the need for additions and improvements costing large amounts of money. Such sums could be obtained only by public campaigns, and the success of two such efforts was doubtful. After many consultations the governing boards of the two institutions determined that the public interest required that they make common cause. A union was consummated in 1945. With the best of each blended in the whole Grace-New Haven stands as the result.

The School of Medicine and the Hospital are worthy companions. As the chief function of the School is to maintain teaching and research at the summit of their attainable best, so the first duty of the Hospital is to provide for every patient the utmost in expert care. Its highest concern at any one moment is for that suffering individual who at that moment has entered its doors. All its staff and all its facilities are put into action to serve the needs of that person. With an average of more than 60 new patients every day of the year the Hospital must still think of them as individuals,

the needs of no two of whom are ever exactly alike. As a proof that our concern for the individual is shared by discerning and compassionate members of the community I cite the recent action of John Day Jackson, who, as a result of his own thinking, created two princely foundations to assist individuals in combating their afflictions, one the curse of arthritis and the other the often tragic disorders of the eyes.

We regard ourselves as the servant of every man, woman, and child not only in New Haven, but in the entire State and beyond, who may come to us; and we count it a privilege to be at their disposal. Fully as high as our duty to our patients is our duty to the doctors who send them to us. These doctors have the right to require from us the utmost in service, the most willing of cooperation, and the most perfect of mutual understanding. May we never fail them!

What of the future? The broad controlling fact is this: In 1945, upon the combining of New Haven Hospital and Grace, the unified institution started upon its own vigorous renaissance. The stimulus came from an accomplished layman, D. Spencer Berger, and an equally accomplished medical administrator, Dr. Albert W. Snoke. To their leadership the whole community, both lay and professional, made response. There has been going on ever since a forward movement, with no interruption in its progress and no abatement in its vigor. The inner spirit that animates and controls it seems now to have been so fully accepted and endorsed by those actively associated in it and by all its con-

stituency as to make certain its adequacy to the great tasks that lie ahead.

In taking its place formally as a partner in the Yale-New Haven Medical Center, Grace-New Haven Hospital rededicates itself to the universal cause of healing, and reaffirms its confidence in the Center as the best type of instrumentality yet devised for that end.

In 1906 the great Harvey Cushing, in a letter to President Hadley, made this statement: "I see no reason why a school of the first rank in all departments should not exist at New Haven. There seems to be an opinion that the city is too small to support with sufficient clinical material the last two years of a large medical school . . . I think in many respects this view is not well grounded. In my estimation the day is not far distant when, as is the case in Germany, the small select schools in relatively small cities will become those whose degrees are the most sought after by the best class of students. . .

"So far as I could see during my brief visit, the one pressing need of the School is a hospital with a continuous service for those occupying the clinical chairs. Then from a hospital point of view, nothing so certainly assures its growth and reputation as such an alliance."

I dare to believe that Harvey Cushing would have given his ardent approval to the Yale-New Haven Medical Center, and would have said with us that we are greatly blest in being able to do our work in an atmosphere of intellectual and spiritual vigor unsurpassed anywhere in the world.

Members of The Connecticut State Medical Society reading papers before other organizations are requested to submit their papers to the JOURNAL for consideration by the Board of Editors for publication. Please send them to:

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Book Reviews

GENERAL UROLOGY, 2nd Edition by Donald R. Smith, M.D., Lang Medical Publications, Los Altos, California, 1959. 322 pp. \$4.50.

Reviewed by CLYDE DEMING

This is apparently a textbook for students. It is extensive in the coverage of the subject and is clearly outlined, but rather short in some of its descriptions. The author entirely omits the use of the bougie a boule for urethral examinations for strictures, and relies upon catheters and metal sounds which often give misleading information to beginners in urology. The illustrations are numerous and demonstrate the anatomical lesions clearly. The numerous x-rays also disclose the topic under discussion and add much to the text. The tome is not adequate for advanced study in urology, and the bibliography is too limited. The small print distracts from the actual value of the edition. For a beginner in the study of urology, it will serve the purpose well.

CHILDBEARING BEFORE AND AFTER THIRTY-FIVE.

By Adrian Bleyer, M.D. New York, Vantage Press, Inc. 119 pp. \$2.95.

Reviewed by IRVING FRIEDMAN

This little book is directed primarily, not to physicians, but to intelligent laymen: in the author's words "college students and leaders of society who will show the way." It marshals the evidence to prove that there is a time biologically most favorable for child bearing, and that this propitious time is between the ages of 18 and 30. These are the very years often preempted for education, attainment of economic security, and other socially desirable purposes. Dr. Bleyer does not belittle the merit of these objectives, but emphasizes that society can ignore the facts of biology only at a price. The price of delayed childbearing is a rising incidence, with increasing maternal age, of congenitally defective children, of abortion, premature labor, stillbirth and neonatal death. This rise is relatively slight in the quinquennium 30-35 years, but increasingly precipitous thereafter. Much of the book is devoted to a study of maternal aging in relationship to defective children, and the evidence is most conclusive with respect to mongolism, but the same trend is evident even for defects having a genetic basis, such as achondroplasia. Curiously, the age of the father is irrelevant.

This deterioration of reproductive efficiency is not only in the offspring, but in the mother as well. With increasing maternal age, there is a rising incidence of prolonged labor, toxemia and other major complications of pregnancy, caesarian section and overall maternal mortality.

The author repeatedly reiterates that the overwhelming majority of pregnancies end happily, even for the more aged mothers. If, for various reasons, childbearing is postponed, it may still be undertaken late rather than not at all. As a

social policy, however, childbearing during the most propitious years should be encouraged.

The statistical presentation sometimes suffers from excessive simplification. Thus Table 17 shows an increasing rate of maternal deaths with advancing age in the United States Bureau of Census data for 1948. There are no comparable mortality rates given for non-gravid women. It is well recognized that as people grow older they are more likely to die, and Table 17 does not indicate whether pregnancy enhances or diminishes this tendency.

NEW AND NON OFFICIAL DRUGS 1959. Evaluated by A.M.A. Council on Drugs, J. P. Lippincott Company. 687 pp.

Reviewed by DENIS S. O'CONNOR

In the present day of competition by the many excellent pharmaceutical manufacturers for the use of their particular brand of a basically valuable chemical compound under a trade name which may or may not be descriptive of the basic substance, it is desirable that the physician have disinterested information about the substance itself in order that he may be able to accurately evaluate the claims that may be made for any particular trade named product.

This book makes such an evaluation possible and should be on the desk of every physician who has occasion to prescribe drugs. The problem of determining which of the trade products most nearly meets his requirements would then be simplified.



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Around The State

Hartford County

Leo P. Giardi is new president of the Connecticut Academy of General Practice. Arthur D. Keefe of West Hartford is president-elect.

Stewart P. Seigle is president-elect of the newly formed American Society of Internal Medicine. Election took place recently in Chicago. Also present there were Edward Nichols, president of the Connecticut Society of Internal Medicine and Benjamin V. White.

Speaking at the monthly luncheon meeting of the Wesleyan University Alumni Club recently was E. Myles Standish.

Two papers by Institute of Living psychiatrists were discussed at the 115th annual meeting of the American Psychiatric Association in Philadelphia. William Zeller co-authored a paper on "Attitudinal Factors Influencing Outcome of Treatment of Hospitalized Psychiatric Patients." John H. Houck, discussed a paper on "The General Practitioner and the Psychiatrist."

Benjamin Wiesel, John Allen and Ralph Reinfrank recently participated in a panel at Hartford Hospital on the advance being made in the mental and physical rehabilitation of the patient, both in medicine and nursing.

New Haven County

Maurice M. Hillman recently gave a paper on "Bronchial Asthma in Infants and Children" at the Interim Scientific Meeting of Phi Lambda Kappa Medical Fraternity. This was held at the Deauville Hotel, Miami Beach, Florida.

Max G. Carter is the recipient of the first annual Albie Booth Memorial Grant of the New Haven Heart Association. This award was presented to Dr. Carter by Dr. William Cohen at the annual meeting of the association held at Gaylord Farms Sanatorium in Wallingford. The purpose of the grant is to assist in the development of new techniques for the correction of valvular defects in the human heart and in the training of surgical teams in these delicate operations. Dr. Carter's work in this field has been going on for some years. It is the purpose of the Albie Booth Memorial Grant to enable him to continue it at a stimulated pace for the benefit of those people in the New Haven area suffering from valvular problems.

WOMAN'S AUXILIARY

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Annual Report of the President of the Woman's Auxiliary to the Connecticut State Medical Society

Mr. Chairman and Members of the House of Delegates:

It is an honor and a privilege as President of the Woman's Auxiliary to the Connecticut State Medical Society to present to you the report of our activities for 1958-1959, our fourteenth year.

The Connecticut State Medical Society, through its Subcommittee on Health Careers and the Public Relations Committee, asked the Woman's Auxiliary to help in the recruitment for personnel in the 150 related paramedical careers. Over seven county chairmen and 175 local contact representatives worked in close cooperation with the State Medical Society. On October 28, 1958 the first guidance program was given for the workers. Guidance directors in 75 high schools in the State have now been contacted. In 45 high schools "Helping Hands for Julie" was shown and in 30 of these schools speakers (mostly M.D.'s) addressed the group and answered questions about the various careers. Two Hundred and Sixty-eight Health Career cards have been filled in and registered with the Connecticut State Medical Society. The Public Relations Committee is processing this information and will mail material concerning the career of interest to each registrant.

The Auxiliary has raised \$1300. for nursing scholarships and \$2900. as scholarship help for medical students. Mrs. Edward P. Allen, our State Chairman, reports:

"The Woman's Auxiliary has arranged for and conducted tours of many nearby hospitals and a few excellently planned and helpfully conceived Hospital Career Guidance Programs have been given in some of our large hospitals. Either through distribution of material or high school film programs, we have alerted thousands of our younger generation to the great need that exists today in these health-related fields. Our program is not a "crash" program, but rather a long-range one definitely looking to the future with its overall health manpower problem.

"The National Foundation has given to the Connecticut Health Careers five scholarships of \$500 each for four years, a total of \$10,000. These scholarships will be given to high school students to be trained in the health career of their choice. Besides the grants the Auxiliary was commended for the work we are doing in this field."

The foundation now laid is a strong one and we are looking forward next year to an even greater area of helpfulness.

In 1958 we were asked by the Interim Committee on Public Welfare and Humane Institutions of the Connecticut Legislative Council to make a survey of the facilities for training and educating the mentally retarded. All the counties cooperated and the information that we were able to obtain was of great help to this committee. We completed this project that was started last year.

Our membership for 1958-59 is 1211. This is about the same as last year. To increase our membership, personal contacts, teas, etc. are given for the prospective new members. I would like to ask your help, too. Nowadays all wives, especially doctors' wives, are very busy, but only these privileged few, who were fortunate enough to marry doctors, have the right to join the Woman's Auxiliary to the Connecticut State Medical Society. We are a part of a National organization. We do have our social affairs, but we are also ready to do important things to help organized medicine. To have only 1211 members in a State where the membership of doctors totals 3225 is much too small.

Like most organizations we have special projects that need money. To raise this money, which is done through the counties, social activities are planned and carried out. This year they have included rummage sales, foodless food sales, a concert with an opera star, bridge parties, fashion shows, theater parties, etc. The largest amount goes into scholarships for nurses and medical students, and the American Medical Education Foundation which this year totaled \$2073.71.

This year a survey of the number of hours given by members of the Auxiliary to civic, voluntary and official health agencies showed an average of five hours per week per member given to community services. Again we helped the State Medical Society in the coverage of county fairs. Booths were "manned" at 11 fairs. This included distribution of first aid charts and leaflets concerning emergency calls and what to do in poisoning cases. Sample copies of "Today's Health" were also distributed.

We have been asked by National to help in the circulation of two publications. "Today's Health" has been given a definite new look and besides selling the subscriptions we try to see that this magazine is found in all doctors' waiting rooms. Gift subscriptions with a letter have been sent to the Governor, our Congressmen and Senators, and to various school libraries.

During half of 1958 and 1959 we were given a page in the CONNECTICUT MEDICINE. Thus our membership is kept in-

formed in an extremely interesting way due to our excellent Editor, Mrs. Paul Tisher, our past President.

Both Civil Defense and Safety are so well organized in Connecticut that we are really on a stand-by basis. Literature has been distributed to the counties. About 80% of our members have prepared their homes for disaster; in two counties, 100%. The safety program has been stressed in the schools, P.T.A. and scout meetings. Our members have acted as judges for safety poster competitions.

Our Legislation Chairman has been on hand to keep the members informed of important developments. When last summer we were called on by National for some real action regarding the Jenkins-Keogh Bill we contacted the correct people, sent telegrams and fully cooperated.

During this year two of our members passed away, Mrs. Grover A. Lyon of Bridgeport and Mrs. Peter J. Scafarello of West Hartford. Dr. Barnett Freedman, the husband of one of our past presidents also died. May we express to those families our deepest sympathy in their bereavement.

Our books have been audited and the treasurer has reported at all meetings.

Changes in by-laws of our constitution have been recommended by the Board and will be placed before the general membership at our annual meeting.

This year we had an Organizational Meeting in May at the same time as our first Board meeting. All the chairmen of the counties were invited so that they would know what their duties were and what was expected of them. Four Board Meetings were held and there was excellent attendance. We had a semi-annual meeting at the Stamford Yacht Club, and the regional national chairmen were invited.

"Safeguard Today's Health for Tomorrow" has been our aim in all our work. May I take this opportunity of thanking all of the county presidents, and the State Board as well as the entire active membership for having given me the privilege of heading for one year this extremely active and worthwhile organization, the Woman's Auxiliary to the Connecticut State Medical Society.

Respectfully submitted,

Mrs. Charles Murry Gratz
President

THIRTY-FOURTH CONNECTICUT CLINICAL CONGRESS
of the
CONNECTICUT STATE MEDICAL SOCIETY
and the
YALE UNIVERSITY SCHOOL OF MEDICINE
YALE-NEW HAVEN MEDICAL CENTER, NEW HAVEN
SEPTEMBER 30, 1959

The 1959 Clinical Congress will be concentrated in one day and all of the meetings will be held at the Grace-New Haven Hospital and the Yale School of Medicine.

Two sessions will be held simultaneously in two different meeting places giving a broad selection of topics. Registration for members of the Society will be \$5.00 and provides for admission to all sessions of the Congress.

Hospital residents and interns will be admitted without charge, if a statement of their position, signed by an official of the hospital, is presented to the registration desk.

Make a note of these dates on your calendar.

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ANNUAL REPORTS

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1958 - 1959

(Continued)

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND LICENSURE CONNECTICUT MEDICAL EXAMINING BOARD FOR THE CALENDAR YEAR 1958

Since the Connecticut Medical Examining Board is the Committee on Medical Education and Licensure of the State Medical Society, the following constitutes the official report of the Medical Examining Board.

The membership of the Board during 1958 remained unchanged with the reappointment by Governor Ribicoff of Louis P. Hastings for a term of five years beginning January 1, 1958.

Six regular meetings as required by the Medical Practice Act were held during the year and in addition one special meeting. Three physicians were reprimanded for various misdemeanors, one of these having been convicted of income tax evasion. Approval for the reissuing of a narcotic license to another physician was granted by the Board.

Three hundred and seventy-three persons were certified as eligible for licensure by the following methods: certified by the National Board of Medical Examiners—166; acceptable licenses issued by 22 States—54; certified on the basis of written examination—153. Two hundred and twenty-seven individuals took the licensing examinations and of these 74 failed.

The States from which credentials were presented were: New York 79; Massachusetts 32; District of Columbia 14; Illinois 8; Maryland 6; Pennsylvania 4; Vermont 4; Virginia 3; Texas 3; Utah 2; Tennessee 2; Iowa 2; Wisconsin 2; Missouri 2; Minnesota 1; Michigan 1; Washington 1; North Carolina 1; Louisiana 1; Nebraska 1.

The failures included five graduates of three American and Canadian schools and 72 from foreign schools. The schools providing the greatest number of graduates during 1958 were as follows:

Yale University	31	McGill University	8
New York Medical College	20	University of Athens.....	8
Tufts University	17	University of Naples.....	8
Cornell University	15	Catholic University of Louvain	5
Harvard University	13	University College of Galway	5
University of Geneva.....	13	University of Erlangen.....	5
National University of Ireland	13	Albany Medical College	4
New York University.....	12	University of Beirut.....	4
Columbia University.....	11	University of Philippines	4
University College of Cork	11	University of Amsterdam	4
State University of New York.....	10	University of Istanbul.....	4
Georgetown University	9	Queens University	4
University of Rome.....	9	University of London.....	4
University of Zurich.....	9		
University of Lausanne	9		

No osteopaths availed themselves of the privilege of taking the examinations in medicine and/or surgery as permitted under Connecticut law.

The Education Permit provision continues to operate satisfactorily. One hundred and forty new permits were issued and in addition 54 renewals granted. This meant that the total number of 194 physicians was added to the intern and resident staffs of Connecticut hospitals who otherwise could not have been employed.

During the summer Dr. Creighton Barker, for many years secretary of the Board, suffered a serious illness from which recovery is now considered unlikely. The Board feels very keenly the loss of Dr. Barker whose faithful services over a long period have contributed much to the efficiency of the Board as well as maintaining cordial relationships with the Governor and with members of the General Assembly. Connecticut's prominent place in the Federation of Medical Examining Boards is largely due to Dr. Barker's wisdom and efforts. During Dr. Barker's absence Dr. Louis P. Hastings has served as acting secretary.

Respectfully submitted,

John D. Booth

REPORT OF THE COMMITTEE ON AGING

The Committee on Aging was established by the Council on May 21, 1958 and the above named members appointed. The Committee has met five times and has made a survey of the areas of interest appropriate to the Committee. Certain areas have been found to be of special interest and have been assigned priority in the matter of study. The following statement was formulated by the Committee:

"Aging and the problems of aging are important to but not the exclusive concern of the medical profession. It is important that the medical profession does its full and just work in its own sphere, does not exaggerate its responsibility and area of influence, but nevertheless plays its part with other groups interested in the welfare of the elderly."

Areas which have been the subject of discussion include the education of various groups about the role of the medical profession in the social and general welfare of the elderly as well as the purely medical problems; facilities for the treatment of the aged such as nursing homes and convalescent hospitals and the facilities for the care of the aged who are mentally ill; home care programs in the State; the function of the golden age clubs and similar organizations; the work of the Governor's commission on the care of the elderly, the number of aged on welfare roles and other topics.

The Committee felt it was of the greatest importance that all doctors realize their responsibilities in the matter of the care of the elderly and attention is particularly drawn to the resolution of the House of Delegates of the AMA adopt-

ed at its meeting in Minneapolis, December 2-5, 1958, namely: "That physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate." It is to be noted that this is the official policy of the Association and physicians should be fully informed about this.

A large part of the time of the Committee has been spent discussing insurance plans, both commercial and non-commercial, for coverage of the aged. The Committee has considered some new plans which have been in operation in some States for varying periods of time and which are presently being introduced in Connecticut. The Committee feels that the Society should study what insurance coverage is available for the aged from the point of view of hospitalization and medical-surgical benefits.

A national White House Conference on Aging will be held in January, 1961 and plans are being made for local and State conferences in preparation for the national meeting. The Committee on Aging feels it important that members of the State Medical Society participate in the planning of the local and State conferences in cooperation with other organizations tackling this problem.

The chairman of the Committee attended a national conference on aging sponsored by the AMA's Council on Medical Service, Committee on Aging, held in Chicago, September 13-14, 1958. At this conference the problem was surveyed from a broad point of view and special areas of interest to the medical profession were emphasized.

The chairman wishes to express his deep appreciation of the hard work, cooperation and the assistance of members of the Committee during this its first year of existence. Thanks are also due to Dr. William R. Richards, executive secretary of the State Medical Society, for the help and assistance which he has given the Committee.

Respectfully submitted,
John Donnelly

REPORT OF THE COMMITTEE ON STATE LEGISLATION

Since this report is being written before any final actions have been taken by the 1959 State Connecticut Legislature, it will, therefore, of necessity, be general in nature.

The encroachments on the field of medicine by labor and other groups are increasingly evident this year, as in the past, and such bills as Senate Bills No. 453 and No. 942 requiring hospital and medical service groups to include representatives of organized labor and consumer representatives on their Board of Directors indicates the trend (and they're not at all bashful about asking for at least 50% representation on these boards) and this is only the beginning.

There are twenty-two bills having to do with Workmen's Compensation, some repeats of previously rejected legislation and of varying import that are being analyzed and followed closely by Dr. John Kilgus and his Committee on Industrial Health. Some have merit, others are on precarious, even unsound medical grounds such as the one having to do with cardiac complications considered as in "the line of duty."

Fluoridation of water supplies is considered in several House Bills running the gamut from House Bill No. 2096 to

authorize fluoridation subject to approval of referendum to House Bill No. 3615 to prohibit fluoridation of any public water supply and House Bill No. 3344 which would prohibit Public Health employees, officers, appointees, etc., or Commissioners from "engaging in the promotion of fluoridation of any public water supplies."

Once again the establishment of a Medical and Dental College is being considered, but it would seem doubtful that much progress will be made if the Legislators continue to be as economy minded as they seem to be starting out.

Euthanasia is again being considered, but it appears doubtful that it will fare any better than it has in the past.

Reorganization of the Connecticut State Health Department is sought in one bill that could have political implications in that as originally submitted three non-medical personnel would have key positions in the chain of command and another part of the bill would allow one group to bypass the Commissioner of Health entirely and report directly to the Governor. Several other bills would also involve the State Health Department by creating a Commissioner of Radiation and create a Commissioner on Narcotics. Another would integrate the Commission on Alcoholism with the Department of Mental Health and there is even a bill demanding investigation of the Connecticut State Health Department.

House Bill No. 2106 would apparently make it possible for *all* licensed members of the medical profession to operate in *all* non-profit hospitals and a companion bill by the same author would make operating rooms available for *all* licensed dentists in *all* non-profit hospitals. The same author, introduced bill No. 2105 "to rid our communities of the squatters now illegally holding office as members of the board of trustees and return the hospitals back to the people; rid our communities of the New Haven Directors who have invaded our hospitals against our wishes; and also to remove the hospital administrator who is overpaid and unqualified."

House Bill No. 3103 would establish a State Medical Board to pass on qualifications of all physicians and surgeons.

House Bill No. 3204 would place a maximum fee on polio vaccinations from physicians receiving cost-free vaccine.

House Bill No. 3618 would require admission to the licensure examinations of persons otherwise qualified who had post graduate training in medical schools or hospitals in Canada and Europe.

House Bill No. 2671 would include optometrists in the provision for licensed and mechanical opticians and assistants. Senate Bill No. 996 also deals with optometric laws and No. 834 with regulation of audiometry.

House Bill No. 3340 would require prescriptions for all vitamins.

House Bill No. 3444 would provide for annual health examination for pupils.

House Bill No. 3507 would require Directors of Health in towns of 40,000 or more to hold degrees in Public Health.

Senate Bill No. 48 would require poliomyelitis vaccination for each public school child.

Senate Bill No. 370 would prevent doctor shopping by drug addicts in order to obtain narcotic drugs.

Senate Bill No. 547 would prevent the use of fluoroscopic x-ray shoe fitting devices.

Senate Bill No. 274 would "create statutory authority to set up equal fee schedules for medical and osteopathic specialists, serving needy persons chargeable to the State of Connecticut."

Senate Bill No. 267 would permit licensed osteopathic physicians to use narcotics and Bill No. 269 would give osteopathic physicians two members on the Connecticut Medical Examining Board.

Then Senate Bill No. 307 is a most important bill innocently listed as "Clarifying the definition of chiropractic" which would allow markedly increased medical and beginning surgical privileges to the chiropractor. This bill has been heard in the Legislative Committee already and found the chiropractors themselves divided and the International Chiropractic Association joined the Connecticut State Medical Association who were vigorously represented by Dr. John Gallivan in opposing this bill. However, this isn't the last to be heard of this or similar bills and it well behooves the members of the Connecticut State Medical Association to watch out for this and similar legislation because it will be continually coming up again if it fails now.

Senate Bill No. 998 would provide for adequate and effective autopsy service and medicological consultant service to coroners, medical examiners, police and prosecuting officials.

House Bill No. 2152 and Senate Bill No. 332 would provide for use of chemical tests for intoxication as evidence in prosecution of drunken driving.

The above are not all the bills pertaining to the Medical profession by any means, but are listed to give the members of the Connecticut State Medical Society an idea of what is being presented in the Legislature and it is only reasonable to assume that those that fail now will be reintroduced in the future and pressure will mount as the time goes on and only by alert, intelligent, concerted action can the medical profession remain free from encroachment and political control.

One thing each physician in Connecticut must realize and that is that he or she must be willing to actively take part in helping the legislators make up their minds on legislation pertaining to our field. No paid lobbyists are as effective as a group of determined medical personnel and nobody can do the job but ourselves.

The Connecticut State Medical Society is not just a vague entity, but it is you—and you as individual physicians must be willing to take the time and make the effort to have your voices heard and "come off the pedestal" or the free practice of medicine as we conceive and now know it will be lost in the maze of forces imposing their will upon us to our disadvantage. Keeping aloof from or ignorant of political science can and will be disastrous not only to the profession itself but more important for the best interests and welfare of the people of Connecticut.

The Committee on State Legislation wishes to thank the executive secretary of the Connecticut State Medical Society and his efficient staff, the Society's Council and the various other chairmen of the Society's Committees for the splendid cooperation and without whose help it could not carry out its purpose.

Respectfully submitted,
Clifford W. Mills

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

This Committee has endeavored to follow its mandate in the By-Laws of the Society.

It has brought to fruition, in cooperation with the Woman's Auxiliary, the Connecticut Health Careers program. Initiated last year under Dr. Harry C. Knight, it was designed to acquaint high school students with paramedical careers. This state-wide project has won the enthusiastic support of educators, and career programs have been started in more than 40 high schools. Leading allied health agencies formerly engaged in independent career programs are cooperating in the new project. The program has been recognized by the AMA and other national organizations as the first of its type in the country to offer a combined agency approach to help meet the shortages of paramedical personnel. At the request of the Committee, the Council of the Society appointed an independent committee under the chairmanship of Dr. Knight to operate the program.

Study has begun of methods for "Safeguarding the Health of the High School Athlete." Embryonic plans are developing for conferences with physicians, school coaches, athletic directors, school principals, and perhaps parents. County committees have been asked to join in the program, and Dr. Allen J. Ryan of Meriden, chairman of the AMA Committee on Sports Injuries, is cooperating in arranging state and county conferences on this topic.

In furthering the current national campaign against Food supplement quackery, the committee has invited county associations to implement it in every possible way. The campaign is sponsored by the AMA in cooperation with the U. S. Food and Drug Administration and the National Better Business Bureau. Films and speaker information kits are being made available.

Civic groups interested in community health programs can pose bothersome problems if they are not aware of various medical and social implications. The Committee is therefore developing a close relationship with the Connecticut Junior Chamber of Commerce. The objective is mutual assistance, cooperation and advice, both at state and local levels.

The Committee has communicated with the Committee on Public Health in regard to relatively penicillin-free polio vaccine, the furtherance of polio immunization in general, and the relative neglect of triple vaccine in some areas. Full cooperation and assistance was offered to that Committee.

A project in health education sponsored by the Committee on Rural Medical Service was implemented by this Committee last Fall. Exhibits showing the dangers of commercial poisons were displayed and educational leaflets were distributed at 12 country fairs in cooperation with the Woman's Auxiliary.

Activities in support of the emergency medical call plans sponsored by county and local medical associations included the design of a portable exhibit for use in bank lobbies. This exhibit is being circulated by the Connecticut Savings Bank Association to more than 40 savings banks in the state and currently is being used in cooperation with the Fairfield County Medical Association.

The Accident Prevention Committee of the Society has recently been called upon to advance a program of driver

safety and this committee has cooperated in the project. An exhibit was prepared for the 1958 Annual Meeting of the Society and special material was prepared for publication in *Connecticut Medicine*. Several newspaper releases are currently being written.

The Committee places great importance on a close and personal relationship between physicians and opinion leaders of radio, newspapers and television. Participation has been enlisted through the county and local PR Committees. In some areas a spokesman has been selected as liaison officer.

A plan to organize close contact with our legislators is in progress. A list of our state and national legislators, with addresses, has been placed before the membership to facilitate sending letters and telegrams. The Council has been requested to obtain in cooperation with the Committee on State Legislation a "Coordinator" to keep the doctors informed of legislative activities and of how they can help both by testifying at hearings and by personal contact with legislators at home.

The Committee decided to contact newly licensed physicians urging them to join their county medical association and to utilize its facilities.

The Committee has just begun to inquire into the multifaceted matter of the free choice of physicians. Also being considered are the relative merits of an automobile accident indemnification fund.

Much of the Committee's activity has been directed toward the vigorous continuation of projects already in full operation.

NEWSPAPER RELEASES

Twenty-eight releases from one to four pages in length were written for newspaper, radio and television use and a great deal of information was furnished by telephone.

HEALTH COLUMN

Written for Connecticut's 51 weekly newspapers, this column is now in its 11th year of publication. It maintains communication with rural and suburban editors and continues to be popular.

EDUCATIONAL PAMPHLETS

The demand for publications of this type continues to increase, and a number of new pamphlets have been made available in the past few months. It has been necessary to increase the supply of these considerably during the year and this poses problems of storage and facilities for distribution.

TELEVISION

The Committee actively supports the program of the Connecticut TV Committee for Health Education, comprising representatives from 18 leading health agencies in the state. The TV Committee has been sponsoring health education telecasts for more than three years and these continue to be popular. Negotiations are now underway with WTIC, Channel 3, and with WHTC, Channel 18, for a new series of programs. Four programs were produced for the Society last year in cooperation with the Hartford County Medical Association.

HEALTH EDUCATION FILMS

This service provides films for showing before community groups and has been increasing steadily. The growth has

overtaxed the facilities at the Society's headquarters and this has necessitated transfer of the service to a film agency in Hartford under an arrangement which permits billing of any expense to the requesting organization.

SPEAKERS BUREAU

Requests for physicians to speak before community groups under this program are referred to county associations for speaker selection. The state office provides speakers with films and pertinent pamphlets and exhibits.

FAMILY HEALTH RECORD

This 16-page record is designed so that individuals or parents can maintain a record of happenings pertaining to health. Requests for the record continue to be received from physicians and others in Connecticut and other states. The AMA and the Academy of General Practice have been influenced by the popularity of the Connecticut record to publish similar records for national distribution.

EMERGENCY MEDICAL CARD

Many requests continue to be received for this card, which was designed two years ago for recording of medical information which might be needed in treating emergency cases. Copies of the card are periodically offered for physician use through *Connecticut Medicine* and plans for wider distribution are being considered.

The Committee is striving to obtain and maintain a closer alliance and cooperation with the county associations and local societies, also with local, state and national health organizations. A full-time Public Relations man is on our staff and could to advantage devote his full time to public relations. However, recent events have precipitated many requests and demands on his time and services—from the executive secretary's office and the steadily increasing number of committees of the Society. The present staff is inadequate to perform the function deemed necessary. The Council has been so informed. The Committee sincerely hopes that the lines of communication to and from the Council will progressively clear and become well worn. Mutual understanding, respect and trust and adequate delegation of responsibility are vital to the most efficient and harmonious collaboration within an organization.

Respectfully submitted,
E. Tremain Bradley

REPORT OF THE CANCER COORDINATING COMMITTEE

There were four meetings of which two were held by the entire committee and two by the executive committee. These meetings were not well attended by the entire committee but well attended by the executive committee.

A large part of the business contracted during the year was concerned with close cooperation with the Connecticut Division of the American Cancer Society. This organization is directed by Mr. Edwin Meiss and there has continued to prevail a most productive and informative relationship.

The Medical Advisory Committee of the Cancer Society was again appointed by this committee. The Medical Advisory Committee is a most valuable aid to the Cancer Society in its effort to fulfill its function of providing funds

for education, research and service. A member of the Cancer Coordinating Committee also serves on this committee.

The Cancer Coordinating Committee was instrumental in formulating a working plan for better utilization of the Pap smear technique for examination of cervical smears. A simple and informative pamphlet was prepared for distribution to all the doctors in this State. This should make it much more popular and more extensive utilization should result. A more uniform and lower fee for this test is to be established with some subsidy from the Cancer Society.

The Association of Tumor Clinics has now been abandoned because it is no longer necessary. Because of this, the committee has withdrawn its support of Dr. William Wawro's role as consultant to the Tumor Clinics. He will continue in this capacity until September, 1959. After this time this committee has recommended that the Cancer Society add \$2,000 to the funds of the Connecticut State Department of Health's program of Special Consultants who would visit any hospital which requested this service.

At this time the Cancer Coordinating Committee wishes to go on record in tribute to the outstanding performance rendered by Dr. Wawro as Tumor Clinic Consultant. It was through his efforts that these clinics have matured and are now self-sustaining.

Another Cancer Teaching Day was initiated by this committee and it will be held in Hartford. The theme of this session is to be early diagnosis and the program is aimed at the general practitioner. It is expected that there will be a large attendance because there is direct sponsorship by the Academy of General Practice. This committee recognizes the important role played by the general practitioner and is therefore recommending that representation on the Executive Committee be made from the Academy of General Practice.

This committee has continued to assist the Tumor Registry in Hartford. A new form has been devised for the Tumor Record and this committee has worked diligently with the Tumor Registry on this project. A study of carcinoma of the lung has also been initiated by this committee in a continued attempt to utilize the statistics collected in our hospitals.

Two members of this committee were invited to a ten state regional conference sponsored by the American Cancer Society. It was gratifying to note that many delegates were interested in the organization and progress of this committee. They intend to create a similar one in their own state.

The chairman wishes to thank all members for their help and sacrifices in making this a successful year for the committee.

Respectfully submitted,
William Mendelsohn

REPORT OF THE COMMITTEE ON THIRD PARTY PAYMENTS

The Committee on Third Party Payments has met on eight occasions. Following its initial meeting for purposes of organization, a tentative agenda was developed. The Committee reviewed the report of the Third Party chairman submitted at the annual meeting of the House of Delegates in

April 1958. The revised recommendations were forwarded to the Council.

The Committee discussed in detail changes in the structure and function of the Committee on Third Party Payments and made substantial contributions to the Committee appointed to recommend changes in the by-laws Re: Third Party Payments Committee.

It is the considered opinion of this Committee that its responsibility can be properly exercised only, if the Council shall direct all committees of the State Medical Society concerned with payments by third parties to submit their recommendation to the Committee on Third Party Payments for further evaluation prior to their presentation to the Council or/and the House of Delegates for action.

With this thought in mind the Committee recommends that the Council adopt in substance a proposition previously submitted.

"No action should be taken by relevant committees (i.e. Committee on Veterans Affairs, Committee on Medicare, etc.) concerned with Third Party Payments without referral to the Third Party Payments Committee sufficiently in advance for thorough study and recommendation to the Council."

Respectfully submitted,
Max Alpert

REPORT OF THE COMMITTEE ON EYE CARE

On April 29, 1958, Dr. Fasanella was appointed chairman of the Eye Care Committee at the annual meeting of the House of Delegates for the year 1958-1959.

The Eye Care Committee held four meetings in 1958-59. The most important events arising from these meetings are as follows:

The Eye Care Committee passed a resolution stating that they were in favor of a glaucoma detection program which should be under the sponsorship and direction of the EENT Section.

The Executive Ruling of the Opticians preventing ophthalmologists from adjusting glasses was rescinded.

A Low Visual Aids Clinic has been set up in New Haven Hospital under the direction of Dr. Carlton Phillips.

Dr. F. A. Wies resigned from the committee and Dr. Henry Birge was appointed to take his place.

The opticians have withdrawn the regulations regarding doctor's assistants in the opticianary code.

It was decided to consult the National Eye Care Foundation for advice in all matters when possible.

Dr. Stanley Osborn of the State Department of Health was contacted regarding the prosecution of Dr. W. R. Burgess, optometrist of Windsor for the prescribing of drugs and issuance by the Windsor Pharmacy.

Dr. Fasanella met with the Council of the State Medical Society on January 7 and told them of the contemplated meeting with the optometrists. He obtained permission for the meeting and also received permission to spend up to \$300 for legal advice in this matter, which would come from the State Medical Society. The law firm of Danaher, Lewis

and Tomoney of Hartford has been obtained for these services.

On January 9, 1959, Dr. Fasanella, Dr. Schechtman and Dr. Unsworth met with the members of the Legislative Committee of the Connecticut Optometric Society to discuss proposed legislation. The meeting was friendly in all regards and satisfactory.

It was decided that the Eye Care Committee Chairmanship should be rotated on a yearly basis.

Many points are being discussed by the Committee for submission to Dr. Richards and to the Legislative Committee.

No major problems.

In December, 1958 the matter was brought up of the New England Ophthalmological Society negotiating with the unions.

Following is a preliminary draft from the New England Ophthalmological Society which was received in answer to this question.

PRELIMINARY DRAFT

BE IT RESOLVED: The members of the New England Ophthalmological Society along with the administrative officials of the A.F.L.-C.I.O. are vitally interested in making available the best eye care for all. In regard to the question of direct payment of ophthalmologists by unions, it is the carefully considered and firm opinion of the New England Ophthalmological Society that the ultimate responsibility for the payment of a fee must continue to reside with the patient. If the patient reaches an agreement with the union for union payment of the fee, this is between the union and the patient, and does not involve the doctor.

If the individual patient requests that his bill be sent to a union or another party, this is between individual patient and doctor, but the responsibility for payment still resides with the patient.

As a corollary to the above, the New England Ophthalmological Society wishes to affirm the decided conviction of its members that the best interests of the patient will be served only if the patient continues to have completely free choice of a qualified physician to insure the best eye care.

The Society also wishes to commend the A.F.L.-C.I.O. for their interest in promoting good eye care.

Respectfully submitted,

R. M. Fasanella

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS AND INSURANCE

The Committee on Medical Economics and Insurance has had several meetings and following is a survey of the present retirement and insurance programs in effect in county associations and the Society.

(1) Fairfield County has a retirement plan based on periodic investments in a mutual fund. Each contract has an optional life insurance benefit.

(2) Hartford County has a complete program which includes Life, Disability Income, Accidental Death and Dismemberment, Major Medical, Retirement Benefits, and apparently Blue Cross. This is a group plan.

The Connecticut State program is a group plan and has

been in existence since 1935. Experience with the Commercial Casualty Company has been satisfactory.

The committee has debated the advisability of whether benefits should be provided through the State Society or through the County Organization.

The following are comments as to possible benefits in a State Society program:

A. LIFE INSURANCE

Life insurance is probably the best benefit to offer from a state basis because more substantial amounts would probably be permitted by insurance carriers. This would apply to the five of the eight counties which account for less than 200 members each. There should be a high degree of member interest in the Life Insurance Plan because of the low cost in a group approach.

B. ACCIDENTAL DEATH AND DISMEMBERMENT INSURANCE

Because of the relatively low cost and absence of anti-selection with a coverage of this type, Accidental Death and Dismemberment coverage could rather easily be included with either a Life or Medical Care Plan.

C. DISABILITY INCOME

There is considerable interest in this type of coverage. Many physicians feel that the present limit of \$100 offered by the Commercial Casualty is insufficient and have availed themselves of additional coverage on an individual basis. We feel that additional coverage could be offered on a group basis.

D. MEDICAL CARE BENEFITS

There should be real interest in this type of coverage on a group basis because of the cost and benefit advantage over individual insurance. For the smaller societies, the chance to join in a state plan might make a difference in the benefit amounts and costs offered by insurance companies. The basic structure of a suggested plan might be a deductible of \$500 co-insurance at 75-25% and a \$10,000 maximum with this structure applicable to each separate cause.

E. Because of the existence of the Hartford Plan and the Fairfield Plan, it is doubtful that a group pension plan would obtain sufficient participation to develop a structure of satisfactory size. The Hartford Plan could be extended as could the Fairfield Plan.

F. GENERAL PROBLEMS

There has to be a strong relationship between the State Society and its members so as to handle the administration of the plan, and an earnest desire among the membership for any plan. We feel that a strong stimulus for a retirement plan will come when the Jenkins-Keogh bill is passed. There has been three years experience by the Fairfield Society; and one year experience by the Hartford Society. It should be possible to arrive at a good plan for the state from the combined experience. The state would be in a strong position to benefit from the Jenkins-Keogh bill when passed without having to go through the trial and error period and unnecessary expense.

The basis problems in all types of coverage on the group approach are:

1. Obtaining a satisfactory administrative set-up so as to maintain high participation and to avoid unusual administrative burden to the insurance carrier.

2. Obtaining a satisfactory initial participation ratio.
3. Establishing underwriting controls as to benefits and rates for not having the clear distinction as to termination of active service or retirement at older age, as is found in the employer-employee group.
- The committee is now awaiting instructions from the Council as to whether they should develop any or all of the above plans for the State Society.

Respectfully submitted,
M. David Deren

Seward and Monde
Certified Public Accountants
205 Church Street
New Haven 10, Connecticut

The Connecticut State Medical Society
New Haven, Connecticut

We have examined the balance sheet of The Connecticut State Medical Society as of December 31, 1958 and the related statements of income and surplus for the year then ended, have reviewed the system of internal control and the accounting procedures of the Society, and without making a detailed audit of the transactions, have examined or tested accounting records of the Society and other supporting evidence by methods and to the extent we deemed appropriate.

General Fund:

Cash in banks, reconciled and confirmed by direct correspondence with the depositories, is accounted for as follows:

Commercial accounts:

Second National Bank of New Haven:	
Journal collections	\$ 4,793.80
Journal revolving fund.....	6,000.00
Secretary's office revolving fund.....	5,000.00
Income cash account.....	6,444.63
Principal cash account.....	74.29
	<u>\$22,312.72</u>

Savings accounts:

Connecticut Savings Bank of New Haven		\$19,348.90
New Haven Savings Bank of New Haven		19,664.93
National Savings Bank of New Haven		10,530.39
Chelsea Savings Bank of Norwich.....		273.81

Milford Savings Bank of Milford.....	13,009.97	
		<u>62,828.00</u>
Total		\$85,140.72

The Second National Bank of New Haven confirmed directly to us that as of December 31, 1958 they held the following securities as agent for the treasurer of The Connecticut State Medical Society:

United States Treasury Bonds:				
FACE VALUE	RATE AND MATURITY		BOOK VALUE	MARKET VALUE
\$2,000	3½ %	1960	\$2,000.00	\$2,007.50
7,000	2½ %	1969	6,795.73	6,155.62
5,000	2½ %	1970	5,000.00	4,357.80
3,000	2½ %	1971	2,979.11	2,604.37

Province of Canada Bonds:			
3,000 Province of Nova Scotia 3½ %			
Deb. due March 15, 1964.....	2,988.75		2,895.00
3,000 Province of Saskatchewan 3½ %			
due February 1, 1966.....	3,021.60		2,760.00

Stock:			
50 shares Celanese Corp. of Amer.			
Ser. A 4½ % cum. preferred.....	5,181.25		3,975.00
Total	\$27,966.44		\$24,755.29

Dues receivable of \$2,277 are segregated by counties as follows:

COUNTY	AMOUNT
Fairfield	\$ 693.00
Litchfield	49.50
Middlesex	99.00
New London	66.00
Hartford	775.50
New Haven	495.00
Tolland	66.00
Windham	33.00
Total	<u>\$2,277.00</u>

Accounts receivable—journal of \$8,105.51 consists of \$8,022.92 due from advertisers and \$82.59 for reprints.

Accounts payable—journal of \$179.48 represents amounts due for printing expenses in connection with reprints.

The following is a comparison of budgeted and actual general expenses:

	ADDITIONAL ALLOTMENTS APPROVED BY				ACTUAL OVER OR (UNDER) BUDGET
	ORIGINAL BUDGET	COUNCIL DURING THE YEAR	TOTAL BUDGET ALLOTMENTS		
			BUDGET	ACTUAL	
Secretary's office.....	\$ 36,060.32	\$1,837.29	\$ 37,897.61	\$ 34,558.46	(\$3,339.15)
Treasurer's office.....	7,045.00	—	7,045.00	6,731.67	(313.33)
General and contingent.....	12,808.00	500.00	13,308.00	15,383.11	2,075.11
Public relations.....	18,770.00	—	18,770.00	18,333.33	(436.67)
Committee allotments.....	4,125.00	495.99	4,620.99	3,326.42	(1,294.57)
Building maintenance.....	11,725.00	480.00	12,205.00	11,829.24	(375.76)
Journal.....	56,225.00	—	56,225.00	53,419.79	(2,805.21)
Totals.....	\$146,758.32	\$3,313.28	\$150,071.60	\$143,582.02	(\$6,489.58)

Annual Meeting Fund:

Cash was confirmed directly.

Gurdon W. Russell Fund:

Cash was confirmed by direct correspondence and the Second National Bank of New Haven confirmed directly to us that as of December 31, 1958 they held the following fund securities as agent for the treasurer of the Connecticut State Medical Society:

FACE VALUE	BOOK VALUE	MARKET VALUE
\$600 New York, New Haven and Hartford Railroad Co. 4%—due 2007.....	\$ 397.62	\$ 288.00
\$900 New York, New Haven and Hartford Railroad Co. 4½ %—due 2022.....	308.64	254.25
\$500 New York, New Haven and Hartford Railroad Co. 5% conv. pfd. stock, Series A	128.04	98.12
\$1,000 Boston and Albany Railroad Company, 4¼ % improvement bonds, due August 1, 1978.....	820.00	635.00
Totals	\$1,654.30	\$1,275.37

On September 15, 1958, fund securities consisting of \$5,000 United States Treasury bonds, 2¼ % due September 15, 1956-59 were called for redemption. The proceeds of \$5,000 received thereon are being held in uninvested principal cash as of the date of this report.

O. C. Smith Fund:

We confirmed the principal and income cash by direct correspondence.

Building Fund:

During the year funds have been transferred from the general funds to the funded reserve for depreciation. Cash of \$15,826.12 on deposit in the Connecticut Savings Bank was confirmed directly.

Clinical Congress:

Cash was confirmed directly by the depositories.

General:

The secretary's office has acted as collection agent for The American Medical Association's dues for the year 1958. At December 31, 1958 all collections to that date had been remitted to The American Medical Association.

In our opinion, the accompanying balance sheet and statements of income and surplus present fairly the position of the Connecticut State Medical Society at December 31, 1958, and the results of its operations for the year, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Seward and Monde,

Certified Public Accountants

New Haven, Connecticut
March 30, 1959

Balance Sheet, December 31, 1958

GENERAL FUND

ASSETS

Cash	\$ 85,140.72
Investments (market value \$24,755.29).....	27,966.44
Dues receivable—1958	2,277.00

Accounts receivable— <i>Journal</i>	8,105.51
Automobile emblems on hand.....	186.00
Prepaid insurance	1,023.28
Total	\$124,698.95

LIABILITIES

Accounts payable:	
<i>Journal</i>	\$ 179.48
Accrued commissions—1958 dues.....	9.10
Surplus	124,510.37
Total	\$124,698.95

ANNUAL MEETING FUND

ASSETS

Cash	\$ 12,153.89
Prepaid expenses—1959 annual meeting.....	45.13
Total	\$ 12,199.02

LIABILITIES

Surplus	\$ 12,199.02
Total	\$ 12,199.02

SPECIAL FUNDS

ASSETS

Gurdon W. Russell Fund:	
Cash	\$ 5,440.97
Investments (market value \$1,275.37)	1,654.30
	\$ 7,095.27

O. C. Smith Trust Fund:	
Principal cash	\$ 1,000.00
Income cash	384.60
	1,384.60

Building Fund:	
Land	\$ 12,270.31
Building and equipment.....	140,172.20
	152,442.51
Cash—savings account (funded reserve for depreciation).....	15,826.12
	168,268.63

Clinical Congress:	
Cash	\$ 3,422.32
Prepaid expenses—1959 Clinical Congress	65.89
	3,488.21
Total	\$180,236.71
Grand total	\$317,134.68

LIABILITIES

Gurdon W. Russell Fund—capital.....	\$ 7,095.27
O. C. Smith Trust Fund—capital.....	1,384.60
Building Fund:	
Reserve for depreciation.....	\$ 15,826.12
Capital	152,442.51
	168,268.63
Clinical Congress—capital	3,488.21
Total	\$180,236.71
Grand total	\$317,134.68

Statement of Income and Surplus General Fund

Year Ended December 31, 1958

Income:

Dues earned	\$ 98,410.50
Less, commissions paid.....	333.90
	\$ 98,076.60
Interest and dividends received.....	2,553.58
Rental income	3,960.00
Income from collection of AMA dues.....	616.75
Gross income	\$105,206.93

Expenses:

Secretary's office	\$ 34,558.46
Treasurer's office	6,731.67
General	9,479.26
Contingent fund	5,903.85
Public relations	18,333.33
Committee allotments	3,326.42
Building maintenance	11,829.24
	90,162.23
Excess of general income over expenses.....	\$ 15,044.70
Add, excess of income over expenses— <i>Journal</i> operations	4,917.27
Net income	\$ 19,961.97
Surplus, January 1, 1958.....	\$104,799.40
Deduct, net transfer to building fund to cover cost of additional expendi- tures for building equipment.....	251.00
	104,548.40
Surplus, December 31, 1958.....	\$124,510.37

Details of Expenses

Year Ended December 31, 1958

Secretary's office:

Personal Services:

Executive secretary (retired)	
Salary January 1, 1958 -	
July 30, 1958.....	\$10,791.62
Pension August 1, 1958 -	
December 31, 1958.....	2,500.00
	\$ 13,291.62
Executive secretary (elected April	
29, 1958) honorarium May 1,	
1958 - December 31, 1958.....	4,000.00
Other personal services.....	17,971.65
Miscellaneous	231.50
	\$ 35,494.77

Less, reimbursements from:

Treasurer's office	\$ 4,000.00
Medicare	519.11
Committee expense	349.10
Outside addressing	50.00
Collection AMA dues....	1,000.00
	5,918.21
	\$ 29,576.56

Executive secretary expense.....	253.20
Executive secretary expense—prior years.....	2,130.96
Office supplies	230.88
Printing and postage.....	808.46
Automobile expense	853.56
Telephone and telegraph.....	222.21
Bank charges	22.75
Publications	15.60
Social security taxes.....	404.28
Miscellaneous	40.00
Total	\$ 34,558.46

Treasurer's office:

Clerical and bookkeeping services.....	\$ 4,000.00
Auditors	720.00
Fiscal agent	417.00
Postage and printing (collection of Society dues)	309.20
Collection of AMA dues:	
Personal services	\$1,000.00
Postage and printing.....	231.00
	1,231.00
Telephone and telegraph.....	34.38
Miscellaneous	20.09
Total	\$ 6,731.67

General:

Chairman of council.....	\$ 300.00
President of Society.....	300.00
Council	1,652.67
Delegates to AMA convention.....	2,270.33
Blue Cross premiums for employees.....	401.00
Employees pension fund.....	4,555.76
Total	\$ 9,479.26

Contingent Fund:

House of Delegates meetings.....	\$ 973.23
Contribution to New England breakfast—AMA meeting	50.00
Dues—Conference of Presidents.....	75.00
Painting interior of building.....	1,374.00
Murdock Scholarship Fund.....	21.44
President's picture	9.00
Fifty year certificates.....	12.67
CMS mailings	389.20
CMS legal fees.....	1,360.00
Presentation of Beaumont picture to Wisconsin	191.71
Legal services—Murdock Fund and miscellane- ous	651.54
Civil defense conference—Boston.....	25.00
Mailing of adoption brochure.....	190.45
Conference on dependents' medical care— Minneapolis	198.32
AMA hospitality suite—Minneapolis.....	122.73
Committee to study prepayment plan.....	56.82
Framing charter	45.00
Dues—Nutrition Council	5.00
Printing charter by-laws.....	36.75
Meeting cards	38.00
President's committee on CMS.....	28.97
Gratuity—Lawn Club	15.00
Dues—Connecticut Health League.....	10.00

Christmas luncheon—staff	24.02
Total	\$ 5,903.85

Public Relations:

Personal services	\$ 13,180.00
Printing and postage.....	\$1,505.96
Publications and reprints.....	143.05
Clipping service	200.50
Telephone and telegraph.....	389.21
Travel and expense—AMA meetings....	781.43
Meetings of public relations committtee	645.24
Health exhibits—County Fairs.....	607.10
Television productions	466.97
Supplies and miscellaneous.....	250.73
Social security taxes.....	163.14
Total	\$ 18,333.33

Committee allotments:

Public health	\$ 466.67
National legislation	97.51
State legislation	111.81
Industrial health	11.34
Pharmacy joint committee.....	152.99
Medical care of veterans.....	77.95
Council of New England State Medical Societies	128.50
Dental conference committee.....	19.55
Rural health	144.07
Cancer coordinating committee.....	139.16
Committee on food, drugs, cosmetics.....	68.26
Committee on insurance.....	174.28
Maternal mortality and morbidity.....	61.16
Hospital committee	435.70
Professional relations	6.89
Medical education and licensure.....	17.08
Committee on third party payments.....	23.46
AMEF campaign	444.94
Advisory committee—State agencies.....	76.31
Conference committee—Bar Association.....	216.91
Committee on Accident Prevention.....	180.31
Cornell crash injury committee.....	34.07
Prenatal morbidity and mortality.....	47.96
Committee on eye care.....	43.55
Cooperation committee—Yale	—
Mental health	145.99
Total	\$ 3,326.42

Building:

Taxes	\$ 3,269.20
Custodial services	1,396.20
Insurance	449.48
Electricity, gas and water.....	1,212.06
Fuel	826.28
Maintenance of grounds.....	558.20
Depreciation and obsolescence.....	2,200.00
Supplies	216.26
Telephone	1,142.35
Repairs and replacements.....	559.21
Total	\$ 11,829.24

Statement of Journal Operations
Year Ended December 31, 1958

Income:

Advertising (net of commissions).....	\$48,899.56
Subscriptions	2,394.06
Reprints	6,452.13
Electrotypes	473.86
Single copy	33.50
Roster book	57.50
Miscellaneous	26.45
Total	\$ 58,337.06

Expenses:

Personal services:	
Managing editor (January 1, 1958 - May 31, 1958).....	\$ 2,083.70
Managing editor (May 1, 1958 - October 31, 1958; no salary accepted)	
Managing editor (commencing November 1, 1958).....	833.48
Other personal services.....	6,401.26
Miscellaneous	75.00
Total	\$ 9,393.44

Manufacturing cost:

Printing	\$37,759.24
Postage and handling.....	667.70
Electrotypes	988.15
Reprints	3,779.61
Total	43,194.70

Other:

Printing and postage.....	\$ 61.50
Telephone	60.71
Office supplies	175.74
Sales tax	19.89
Clerical assistance	114.75
Travel expense—editor (retired)	124.25
Social security taxes.....	162.38
Editorial Board dinner.....	52.91
Miscellaneous	59.52
Total	831.65
Total	53,419.79

Excess of income over expenses.....\$ 4,917.27

Statement of Income and Surplus
Annual Meeting Fund
Year Ended December 31, 1958

Income:

Exhibits	\$10,120.00
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Expenses:

Program Committee and local committee on arrangements.....	\$ 43.76
Telephone	44.26
School rental and janitor service.....	543.50
Printing and postage.....	1,747.44
Badges	74.00
Exhibit decorator, rentals and equipment	1,557.91

Meeting operating expenses.....	192.59
A.M. House of delegates.....	583.75
Lunches and dinner expense (guests and entertainment)	49.86
Extra help, clerical, police, firemen.....	1,030.00
Speakers and visiting delegates.....	391.34
Council dinner	309.64
Photographs	18.46
	\$ 6,586.51
Excess of meeting income over meeting expenses	3,533.49
Surplus, January 1, 1958.....	\$8,367.02
Add, interest earned on savings account	298.51
	8,665.53
Surplus, December 31, 1958.....	\$12,199.02

Statement of Capital
Special Funds
Year Ended December 31, 1958

GURDON W. RUSSELL FUND

Balance, January 1, 1958.....	\$ 7,093.00
Add:	
Interest received on savings account and securities	188.27
	\$ 7,281.27
Deduct, disbursements for sundry items of equip- ment and furniture.....	186.00
Balance, December 31, 1958.....	\$ 7,095.27

O. C. SMITH FUND

Balance, January 1, 1958.....	\$ 1,344.04
Add, interest received on savings accounts.....	40.56
Balance, December 31, 1958.....	\$ 1,384.60

BUILDING FUND

Balance, January 1, 1958.....	\$152,171.51
Add, contributions	20.00
Net transfer from General Fund to cover cost of additional building equipment.....	251.00
Balance, December 31, 1958.....	\$152,442.51

BUILDING FUND—RESERVE FOR DEPRECIATION

Balance, January 1, 1958.....	\$13,214.38
Add:	
Interest on savings account.....	411.74
Transfer from General Fund.....	2,200.00
Balance, December 31, 1958.....	\$15,826.12

Statement of Income and Capital
Clinical Congress Fund
Year Ended December 31, 1958

Income:

Registrations	\$ 1,210.00
---------------------	-------------

Expenses:

Committee meetings	\$ 174.47
Speakers	354.57
Meeting operating expenses.....	17.86
Printing and postage.....	678.00
Rentals—hotel	270.00
Projection equipment	80.00
	1,574.90

Excess of expenses over income.....	\$ 364.90
Surplus, January 1, 1958.....	\$3,775.38
Add, interest earned on savings account	77.73
	3,853.11
Surplus, December 31, 1958.....	\$ 3,488.21



RESEARCH:

key to Kent's popularity

In 1958, Kent made the greatest gain in popularity ever recorded by any filter cigarette in any year—a sales increase of 20-billion cigarettes.

Behind this popularity is a story of months and years of research, perfecting the remarkable combination of filter action and flavor found in today's Kent cigarette. In developing Kent, Lorillard research scientists recognized that smokers wanted, on the one hand, a really satisfying taste; on the other, reduced tars and nicotine. In addition, smokers demanded a free and easy draw.

These, then, were the objectives. The first scientific breakthrough in the project was the development of the exclusive Micronite filter, patented by Lorillard. This filter was created because of newly-discovered principles in the field of filtration, which have

been previously described in these pages.

Though this filter satisfied everyone on its ability to reduce tars and nicotine to the lowest level among the largest selling brands, there was still work to be done in the areas of taste and draw. After additional months of research, a new tobacco blend was developed which delivered rich taste *after* the smoke had passed through the filter. Next in the series of laboratory triumphs was a method of improving the draw to compare with the most free-drawing of all filter brands.

The rest of the Kent story is a legend in the tobacco industry. Outside, independent research studies confirmed the fact that Kent had achieved its objectives. Smokers responded. In fact, during the past year, more smokers changed to Kent than to any other cigarette in America.



A Product of P. Lorillard Company—First with the finest cigarettes—through Lorillard Research

Obituaries

Robert Lee Rowley, M.D.
1879 - 1959



Dr. Robert Lee Rowley, retired medical director of the Phoenix Mutual Life Insurance Company, died May 5th in Hartford, Connecticut. He had been active in his retirement until a few months before his death.

He was born August 15, 1879, in Bloomfield, Connecticut, graduated from Hartford Public High School and received his medical degree from Yale University School of Medicine in 1903. He interned at the Hartford Hospital where he served for fifteen years as assistant visiting physician. In 1920 he was appointed to the consulting staff of the hospital, and in 1951 to its honorary staff.

After a period devoted exclusively to general practice in Hartford, he became medical director of the old Hartford Life Company. When, in 1913, he became the first fulltime medical officer and associate medical director of the Phoenix Mutual Life Insurance Company, his duties demanded his giving up his private practice. In 1915 he became medical director, a position which he held until his retirement in 1950.

On October 31, 1911, he married Clara McLean of Rockville, Connecticut. She, their daughter, Mrs. Norman W. Spencer of Avon, and three grandchildren survive him.

From 1919 to 1930 he served as secretary to the Connecticut State Medical Examining Board. He was active in the Connecticut State Medical Society, being a member of its Committee on Legislation and the Committee for Licensing Physicians.

In 1928 he was appointed to the Board of Directors of the Hartford Hospital, on which he was active until November 1958, when he was made an honorary director. While on the board he served on the Executive Committee from 1928 until he resigned in 1951, being active also on the Building Committee, and the Jefferson House Committee.

Besides his activities in insurance medicine and in local medical affairs, he had many outside interests including membership in Nu Sigma Nu, past presidency of the Twentieth Century Club, membership on the Travelers Aid Board, and in the Hartford Golf Club and the Hartford Club. He enjoyed golf and was an enthusiastic participant in the annual Seniors' Tournament.

Dr. Rowley's kindness and thoughtfulness, his spirit of helpfulness, and his good judgment made him a man admired and loved by those who knew him. He will be missed by his many friends.

LLEWELLYN HALL, M.D.

ROBERT A. GOODELL, M.D.

Harold F. Schilback, M.D.
1900 - 1959

Dr. Harold Fenwick Schilback died in the New Haven Hospital on January 14, 1959. He was born in Brooklyn, New York in 1900 and attended City College and Long Island Medical School, graduating from the latter in 1932. He interned in St. John's Hospital from 1932 to 1934 and then served a Residency in the Brooklyn Eye and Ear Hospital 1934-1936.

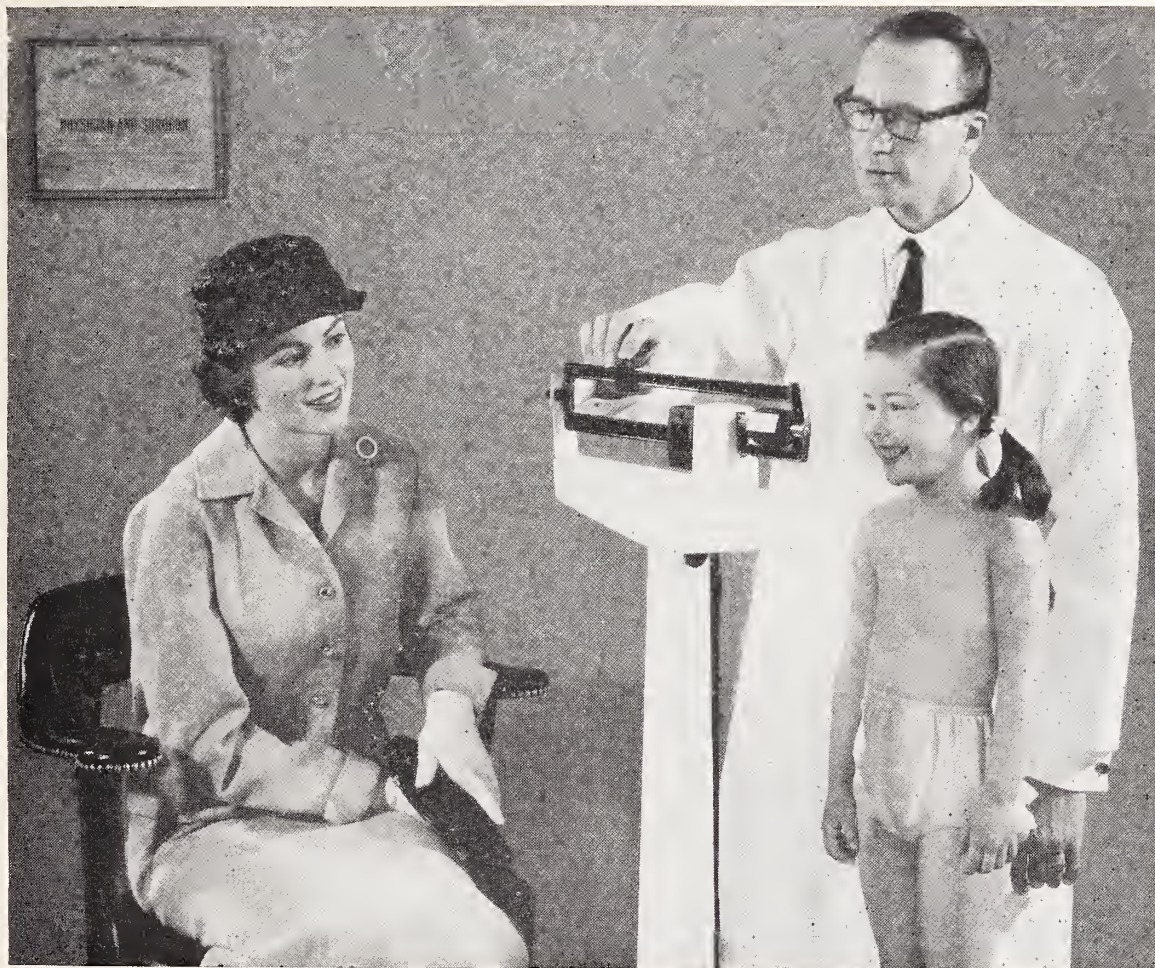
Following this he spent several months visiting Eye Clinics in the Eastern states and later settled in Brooklyn where he practiced ophthalmology until moving to Connecticut. He was director of ophthalmology at Long Island College Hospital and associate surgeon at Brooklyn Eye and Ear Hospital. He also had a teaching fellowship at Long Island Medical School and was with the Metropolitan Life Insurance Company for ten years 1940-1950. He was a diplomate of the American Board of Ophthalmology.

In 1956 he moved to New Milford, where he had a summer place and opened an office for ophthalmological practice and became a member of the New Milford Hospital staff and Litchfield County Medical Association.

His work had always been of the highest type and his interest and care of patients had earned him a well merited reputation. His untimely death is a great loss not only to Litchfield County but to his many friends and to the field of ophthalmology.

He is survived by his widow, Helen Campbell Keenan Schilback.

IRVING L. CABOT, M.D.



Underweight Children Gain and Retain Weight with Nilevar[®]

One of the most convincing evidences of the anabolic activity of Nilevar, brand of norethandrolone, has been its ability to improve appetite and increase weight in poorly nourished, underweight children.

A highly important feature of the weight gain thus produced is that it is not ordinarily manifested by deposition of fat but as muscle tissue resulting from the protein anabolism induced by Nilevar.

Anorexia and "Weight Lag" Study—Brown, Libo and Nussbaum have reported* consistent and definite increases in rate of weight gain in eighty-six patients, ranging in age from 7 weeks to 15½ years. This beneficial action of Nilevar was observed in the patients with organic and traumatic disorders as well as those whose only complaints were poor appetite and/or persistent failure to gain weight.

In this study, the weight gained was not lost

after discontinuance of Nilevar therapy although many patients did not continue the sharp gains effected by the drug.

The authors are of the opinion that Nilevar is a highly useful anabolic agent for influencing weight gain in underweight children.

When Nilevar is administered to children a dose of 0.25 mg. per pound of body weight is recommended and continuous dosage for more than three months is not recommended.

Nilevar is supplied as tablets of 10 mg., drops of 0.25 mg. per drop and ampuls of 25 mg. in 1 cc. of sesame oil. Further dosage information in Searle Reference Manual No. 4.

G. D. Searle & Co., Chicago 80, Illinois.
Research in the Service of Medicine.

*Brown, S. S.; Libo, H. W., and Nussbaum, A. H.: Norethandrolone in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

In Memoriam

Appell, Paul H.—Bristol; New York University School of Medicine, 1923; appointed to the pediatric staff at Bristol Hospital in 1930 and elected secretary-treasurer of the medical staff in 1931; named vice-president of the staff in 1933 and served as president in 1934; appointed chief of the pediatric staff in 1950 and three years later retired because of failing health; died May 20 at the Farmington Convalescent Home after an extended illness, age 59.

Fink, Elizabeth—Bridgeport; University of Leipzig School of Medicine, 1923; practiced in Bridgeport since licensure in 1940; died at her home in that city May 21, at age of 70 years.

Hanley, James L., Jr.—Bridgeport; Yale University School of Medicine, 1935; received license to practice in Connecticut in 1945; at time of his last illness was practicing urology with his office in the Medical-Dental Building, Lafayette Street, Bridgeport; during World War II was stationed at the 53rd General Army Hospital, in England; died May 31 in St. Vincent's Hospital, Bridgeport, following an illness of several weeks, age 49.

Thomases, Saul—Stratford; New York University School of Medicine, 1939; practiced in Connecticut since licensure in 1941; a member of the attending staff at Bridgeport Hospital; died May 21 at age of 54 years.

The Doctor's Office

Peter Bonadero, M.D. announces the opening of an office for the practice of pediatrics, in association with Dr. J. Harold Root, at 103 North Main Street, Waterbury.

Bruce R. Marshall, M.D. announces the opening of an office for the practice of otolaryngology at 150 Jefferson Street, Hartford.

Placement Wanted

The Society's placement service is in receipt of the following names of doctors who would like to practice in Connecticut.

James J. Daubert—Age 29—M.D. Loyola University 1956—U. S. Naval Hospital—General Practice—Rural or Semi-Rural—Solo or Associate.

Peter A. Nardulli—Age 30—M.D. Creighton University 1956—Westover Air Force Base—General Practice—Partnership or Associate.

William R. Duval—Age 26—M.D. N. Y. Medical College 1958—General Hospital of Riverside County, Arlington, Calif. — General Practice — Rural.

Frank P. Frascati—Age 31—M.D. Georgetown University 1954—Hunterdon Med. Center, N. J.—General Practice—Association with an individual, group or in solo practice.

H. M. Payan—Age 34—M.D. Tehran, Iran—Queens General Hospital, N. Y.—Pathology—Assistant to Pathologist.

Any member of the Society knowing of opportunities for placement of these physicians is asked to communicate with the Executive Secretary's Office, 160 St. Ronan Street, New Haven.

VA Hometown Care Endorsed

Medical care for a veteran with a service connected disability can be improved through the intermediary contract of the Veterans Administration's hometown care program, AMA's Committee on Federal Medical Services has declared.

Dr. Russell B. Roth, Erie, Pa., is chairman of the committee which is a part of AMA's Council on Medical Service.

Under the intermediary contract the state medical association designates a third party, usually Blue Shield, to administer the plan, bill the VA and pay the physicians.

The intermediary contract is an effective method of improving the care of a service connected disability because it provides for continuity of care through the family doctor, the committee said.

It cited these other advantages:

Transportation costs to a VA hospital are eliminated.

The veteran does not have to lose time from his work.

He is not separated from his family.

In some cases, it prevents hospitalization.

It also permits follow-up on cases when they leave the hospital.

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LO 2-8622

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FO 8-2812

NEW MEDICARE INFORMATION

Management Of Suspected And/Or Proven Malignancy

1. Reference is made to:

- a. Paragraph 3b, ODMC Letter No. 6-59, dated 9 April 1959
- b. Paragraph 8a (2) (a)2, ODMC Letter No. 16-58, dated 29 Aug. 58
- c. Paragraph 2, ODMC Letter No. 3, dated 4 February 1957

2. Since the necessity for restricting the Medicare Program, effective 1 October 1958, increasing numbers of cases involving suspected and/or proven malignancy (especially of the breast and cervix) have been brought to the attention of this office. Many of these cases are identified as requiring urgent attention with notations that surgery cannot be planned and that postponement is not advisable or consistent with sound medical practice. These patients frequently are afflicted with a disease process which is not readily visible and often does not produce subjective complaints characteristically associated with other more readily identifiable acute medical or acute surgical conditions.

3. It is the position of this office that the patient with suspected and/or proven malignancy is an acutely ill patient and qualifies for care under the Program. Many of these patients require immediate hospitalization despite the absence of readily identifiable signs and symptoms. When, in the opinion of the cognizant medical authority, treatment is urgently required, and performed in a hospital without delay, immediately upon discovery of the condition, such care should not be considered plannable. These cases will be considered payable at Government expense when certified by the charge physician in accordance with ODMC Letter No. 6-59, and provided the care is otherwise authorized (i.e., Medicare Permit when required). Such qualifications of urgency cannot be based, for payment at Government expense, on mental anguish, emotional attitudes, or socio-economic factors involving the patient and/or sponsor, but will be based solely on the medical requirement for immediate hospitalization.

4. *Biopsies*

a. *Not Authorized for Payment*—It is emphasized that biopsies performed on an outpatient basis and those services usually considered outpatient care are not payable at Government expense.

b. *Authorized for Payment*—Biopsies performed on patients formally admitted to the hospital are payable provided the charge physician indicates the need for hospitalization and states that the biopsy was required to properly manage the suspected, or proven, malignancy which, in his opinion, constituted an acute condition as stipulated in paragraph 3, above. In those instances where a *Medicare Permit* is required for the original admission, an additional Permit will not be required for a subsequent readmission for surgery based upon a positive biopsy report.

c. *Negative Pathological Reports*—In some instances, the biopsy report will be "negative." Such care related to the negative biopsy is likewise authorized at Government expense. Subsequent definitive surgery in such instances directed toward these benign conditions is not payable at Government expense.

5. *X-ray Therapy of Suspected and/or Proven Malignancies*—Under certain circumstances the patient, in the opinion of the charge physician, should receive x-ray, radium, or radioisotope therapy rather than surgery. In these instances, it will be necessary that the patient meet the requirements established in paragraph 3, above, and that the x-ray, radium or radioisotope therapy be *prescribed* or *initiated* during a period of hospitalization for authorized care. In this regard, attention is invited to paragraph 2, ODMC Letter No. 3, dated 4 February 1957, which permits use of radiation therapy on an outpatient basis when such care is prescribed or initiated during an authorized period of hospitalization.

6. It is not the intent or purpose of this letter to encourage or infer that payment at Government expense will be authorized for care of warts, nevi, moles, hemangiomas, telangiectatic lesions, keloids, verrucae, condylomata, molluscum, scars, or other similarly recognized conditions when such care is for cosmetic reasons. To be authorized for payment, the claim must be supported by clinical evidence of malignancy and care must have required hospitalization.

7. Fiscal administrators are requested to publish and disseminate the contents of this letter at the earliest opportunity.

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FOR SALE—Bausch, Lomb binocular microscope \$275.00—electric centrifuge \$20.00—automatic autoclave demonstrator \$90.00—sphygmomanometer \$32.00—mercurial blood pressures \$20.00—rebuilt sterilizers \$30.00 up—Cameron cauterodyne \$35.00—new short wave \$150.00—14 x 17 cassette, par speed screens \$30.00—xray view box \$20.00—otoscopes and ophthalmoscopes, at low prices, steel files \$30.00—tremendous savings on orthopedic and EENT instruments. Phone Beverly 7-3145 or write Harry Sacker, 188 Grove Street, Meriden, Conn.

OPPORTUNITY AVAILABLE Connecticut. Forty miles New York City Area needs G.P. Pediatrician-D.D.S., etc. Population 6,000. Three new suites available centrally located in growing town with unlimited potential. Ideal personal living. Private beach-tennis-sailing. Write M.S. c/o Connecticut State Medical Journal, 160 St. Ronan Street, New Haven, Conn.

Paramedical Paradox

Paramedical groups are "paradoxically perpetrating the personnel shortages they are trying to overcome" by raising their educational sights too high, according to Nathan Bushnell III, administrator of Franklin Memorial Hospital, Rocky Mount, Va.

Maintaining that there are "numerous aspects of every medical and paramedical field which can be efficiently handled by persons with minimum schooling or on-the-job training," Mr. Bushnell exhorts national ancillary groups to set up short-term training programs.

Otherwise, he predicts in the journal *Hospitals*, "we'll have to close our ears to the demands of neglected patients while we wait for graduation day."

NATCHAUG**Convalescent Hospital, Inc.**

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Examining An Old Wound

CHARLES SNYDER*

Boston, Mass.

"Examining an Old Wound" should bring many a chuckle to Connecticut physicians, because it deals with the old controversy between Boston and Hartford over which city was the birthplace of anesthesia.

Its delivery fittingly coincided with a symposium given by Hartford anaesthesiologists before the New England Ophthalmological Society in Boston, in 1959.

It is particularly to be appreciated because its author, an eminent Harvard Medical Librarian, (Howe Library of Ophthalmology) brings to light many details of the lives of the principal participants, which are unknown to most of us, and in doing so, may finally have settled this ancient controversy.

It is a fascinating coincidence that Hartford, where anaesthesia was first used 100 years ago should in the present day, be the home of one of the most highly esteemed groups of anaesthesiologists in our country.

It is not often that such an enlightening and enjoyable article on medicine and history can come so close to home. On behalf of Connecticut Medicine may I express our gratitude to Mr. Snyder.

Henry L. Birge, M.D., Hartford

ANYONE who has lived in Boston, anyone who has studied medicine in Boston knows and knows for a certainty that the first use of anesthesia in surgical procedures took place at the Massachusetts General Hospital on October 16, 1846. The patient was Gilbert Abbott, the surgeon was John Collins Warren, the anesthesiologist was William Thomas Green Morton, and the agent was sulphuric ether.

These facts are so well known and are so universally accepted as the truth in Boston that Bostonians, as is their nature, have been prone to pay very little attention to the claims of priority that have come from such less well-insulated places to the south as Hartford, Conn. and Jefferson, Georgia.

Yet the claims made by these southern cities for

their native sons have some merit and it is the purpose of this paper to examine briefly the career and claims of the Hartford contender, Horace Wells. When the New England Ophthalmological Society is host to anesthesiologists from Georgia another paper will be presented covering the claims and career of Crawford Long.

It has been said that America's greatest contribution to medical science was the introduction of anesthesia into surgical procedures. If this is true, then the controversy that followed the Morton demonstration of October 16th, 1846 is, by way of contrast, the sorriest contribution America has ever made to medical science. No where in the annals of medicine can there be found a story more filled with greed, sordidness, chauvinism, and selfishness than this one.

None of the contenders for the honors and the expected great wealth was above criticism. The behavior of Horace Wells, up until a few days be-

* Librarian, Lucien Howe Library of Ophthalmology, Harvard University Medical School and the Massachusetts Eye & Ear Infirmary. Read before the New England Ophthalmological Society, January 21st, 1959. Revised, January 23rd, 1959.

fore his death, is subject to the least criticism. There is no evidence anywhere in the records that he, Wells, attempted to gain a large monetary reward for his work as did Morton and Charles T. Jackson of Boston. And Wells certainly had more courage and more concern for mankind and its bodily pain than did the overly cautious Crawford Long of Georgia.

Horace Wells was born in Hartford, Vermont on January 21st, 1815. He was educated in the schools of Vermont and sometime about 1834 he began the study and practice of dentistry in Boston. There were no schools of dentistry in the United States at that time so Wells learned his profession by association with practicing dentists.

By April of 1836, the 21 year old Horace Wells had enough confidence in his skill as a dentist to open an office of his own in Hartford, Conn. Within a short time he succeeded in building up a fine practice. His ingenuity led him to invent and construct most of his dental instruments, and the dexterity and judgment with which they were used soon made him popular, so that he quickly took rank among the first in the city well known for his skillful dentistry.

During his years of practice in Hartford, as was the custom of the times, he had many students under his tutelage who subsequently gained considerable renown. One such student was John M. Riggs of "Riggs' disease" fame; another was C. A. Kingsbury who later was one of the founders of the Philadelphia Dental College. But the most famous student Wells had was William T. G. Morton, the same man who first publicly successfully demonstrated ether anesthesia. Morton also became Wells' partner in a dental office in Boston during 1843 and 1844.

This association of Wells and Morton had an important bearing on what was to become known as the ether controversy.

Like every other man engaged in medicine and dentistry Wells had a constant concern over the problem of pain during surgical procedures. Wells' professional training was not sufficient to allow him to be aware of or to appreciate what had appeared on the subject of anesthetic agents in the scientific writings of Davy, Faraday, and others. But what Wells lacked in scientific acumen he made up for in intuitive thinking and daring.

On December 10th, 1844, Wells and his wife attended in Hartford "A Grand Exhibition of the effects produced by inhaling Nitrous Oxide, Exhilarating or Laughing Gas." The exhibitor was one "Professor" G. Q. Colton. As a part of his demonstration, Colton manufactured some nitrous oxide, known as "laughing gas," and to amuse the crowd invited spectators from the audience to come forward and inhale the "laughing gas fumes."

Wells noticed that the volunteers who had inhaled the gas stumbled about the stage, scraping their shins and knees on the benches and yet they did not seem to be conscious of any pain. At that moment something clicked in the mind of Horace Wells and his destiny was sealed.

Wells told his thought to his friend John Riggs and together they persuaded Colton and three other men to come to Wells' office the next morning. Colton brought with him his gas bag. In the presence of these five witnesses "Wells seated himself in his dental chair, took the bag in his lap, held the tube to his mouth, inhaled till insensibility relaxed the muscles of his arms, his hands fell to his breast, his head dropped on the headrest"; at this point John Riggs took his dental forceps and extracted from the jaw of Horace Wells a previously determined upper molar tooth. The date of this painless dental operation was December 11th, 1844.

Riggs and Wells had agreed the night previous to push the administration of the nitrous oxide to a point hitherto unknown. No one had ever before this time rendered himself or another completely insensible by the inhaling of nitrous oxide gas. No one before this time had, in the presence of witnesses, performed a dental or surgical procedure on a patient while the patient was in a state of induced insensibility.

True the cases of Crawford Long of Jefferson, Georgia had taken place some months prior to Wells experiment, but no one outside of Long's immediate circle knew of the work. So as far as the world of 1844 was concerned Wells was the first man to induce such a planned state for the purpose of performing painless surgery.

When the courageous Horace Wells emerged from the effects of the nitrous oxide gas he exclaimed: "It is the greatest discovery ever made. I did not feel it so much as the prick of a pin."

Almost at once Wells began to spend all his time and money in investigating and utilizing the anesthetic properties of nitrous oxide. During the next few weeks he used it, according to his own statement, on twelve or fifteen patients with no pain attending and no unhappy after effects. When he was fully satisfied of its usefulness and applicability in surgical operations he went to Boston to demonstrate his discovery.

It was in January of 1845 that Wells came to Boston and contacted his old student and partner William Morton. Through Morton he met Charles Jackson and John Collins Warren. Apparently reluctantly Warren agreed to allow a demonstration before the staff of the Massachusetts General Hospital and the students and faculty of Harvard Medical School. Morton assisted at the demonstration.

The entire thing was a fiasco. One observer records the event as follows: "Dr. Warren said to the class, 'There is a gentleman here by the name of Wells who pretends that he has found something to destroy pain. If any of you wish to remain and hear him you can do so.' About one-half of the class remained for the demonstration. Wells made some introductory remarks and then he gave the gas to one of the boys. The boy hollered out, although he said that he did not feel any pain, but the students considered it a failure and they hissed and hurt the feelings of Dr. Wells."

This picture is in sharp contrast to the heroic and epic saga we have been given of the reception and demonstration of Morton's that was to take place in the same hospital with the same audience some 19 months later.

In reviewing the cause of his failure, Wells was convinced that the tube had been removed from the patient's mouth too soon and that a true state of anesthesia had not been reached. He begged for another chance and another patient, but he was laughed from the hall.

Humiliated and discouraged beyond belief, Wells left Boston. For some months he was a sick man unable to practice his profession or pursue the problem of anesthesia. Restlessly he turned his mind to other matters. He invented an ash sifter and a shower bath. He put on a public entertainment in Hartford called "Wells' Panorama of Nature." In the spring of 1846 he recovered enough to take up again the practice of dentistry and to renew his interest in nitrous oxide and, please note, also sulphuric ether.

In October of 1846 when he heard of Morton's success his initial response was one of good wishes and good advice. As soon as his affairs permitted him he went to Boston to see Morton use his discovery. Wells thought at first that Morton had really come upon something new and different. But when he saw Morton use his poorly disguised preparation of ether and his unnecessary and clumsy inhalator, Wells knew that this was his own discovery, only the agent was different.

Although Wells commented in private on Morton's claim it was not until December 7th, 1846 that he made public his claim to being the first to use anesthesia in painless surgery. With this public announcement the battle began.

In making this claim Wells meant that he had been the first man to induce such a state in a patient. He felt the agents, no matter what they were were of secondary importance. The important thing was that patients by inhaling the fumes of these agents could be safely and surely put into a physiological state where it was possible to perform painless surgery on them.

Wells described his claim in the following words: "This discovery does not consist in the use of any one specific gas or vapor, for anything which will cause a certain degree of nervous excitement, is all that is required to render the system insensible to pain; consequently, the only question to be settled is, which exhilarating agent is least likely to do harm?"

If Wells' reasoning is accepted, and there is little reason not to accept it, then he certainly deserves credit for being the first known man of his time to induce a planned state of anesthesia for painless surgery. He asked for no more than recognition of his pioneer work. He did not try to gain great wealth or to obtain patents as did Morton and Jackson.

Viewing all these events from a distance of one hundred and thirteen years, one wonders what all the fuss was about, why there had to be an ether controversy, why there had to be so much greed and tragedy. The evidence is so clear.

Many observers are of the opinion that there would have been no ether controversy had Morton, certainly advised and encouraged by some members of the Boston medical fraternity, not been so persistent in his futile attempts to obtain sole credit, both financial and professional, for rendering surgical operations painless.

In spite of his unadmirable role, one must feel sympathy for Morton. He died in 1868 during an attack of acute mania, caused by a recent publication in regard to the discovery of anesthesia.

Charles Jackson, the second Boston contender, also was a victim of the controversy. The constant worries incident to the controversy in which he became involved sapped his strength and finally deranged his brilliant mind. After seven years of insanity Jackson died in 1880 in an insane asylum.

Tragic as were the lives and the deaths of these two men, they do not compare in depth to the tragedy that marked the last days of Horace Wells.

On January 21st, 1848, Wells' 33rd birthday, Horace Wells, while mentally deranged, due to the effects of constant self experimentation with chloroform, was arrested because of annoyances committed on Broadway, New York. He was charged with throwing sulphuric acid on the clothing of streetwalkers.

Three days later, January 24, 1848, the jailer of the Tombs found the body of Horace Wells in his cell. By his side were found, on his bed, an empty vial, labelled chloroform, the contents of which he had doubtless taken, preparatory to taking life. A penknife and a razor were also on the bed; with the latter he had lacerated the flesh of the left thigh quite to the bone, severing the

femoral artery . . . In the corner of his cell were found his watch and several letters.

If anyone feels that Wells' arrest and suicide were evidence of a depraved and immoral nature, they are wrong. I am sorry there is not time to read to you portions of the letters he wrote to his family and friends just before his final act, for these pathetic pieces reveal, as does nothing else, the sensitive, moral, mercurial nature of the man. He took his life because he felt that during a state of self-induced derangement he had acted in a fashion that had made him unworthy to be a husband, a father, and a member of the scientific community. He had lost his self respect, his reputation, and his good name. These he could never regain. Perhaps he was right.

Wells' failure in Boston was due to a combination of bad luck and bad manners: had he selected his patient with more care and had he administered the nitrous oxide more carefully and had his Boston audience been more understanding, the story would certainly have been different. His arrest and suicide put a shadow over his claims for many years. But any impartial observer of today will without question, when reviewing the facts, give to Horace Wells the credit he asked for himself. He was the first man to use publicly and announce the use of anesthesia in painless surgery.

This brings me to a point of personal embarrassment. Some weeks ago, before this paper was written, Dr. Goodall asked me for the title so it could appear on the printed program. For some reason I don't remember why, I gave the title "Examining

an Old Wound." Now I find I cannot reconcile my material with my title. The ether controversy can, by a great stretch of the imagination, be considered an old wound. If this is so, then what has happened here today is ample evidence that the old wound has certainly healed; for today anesthesiologists can come without fear, to Boston from Hartford. Not only can they come without fear, they can come as invited guests to a hospital that is within the shadow of the building where the first of their number was so grossly humiliated 114 years ago this month.

It may be that the truth is beginning to penetrate well-insulated Boston.

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Open Heart Surgery*

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OPEN-HEART SURGERY

“OPEN-HEART surgery,” more correctly termed surgery of the heart during cardiopulmonary by-pass with extracorporeal circulation, is now being performed in many medical centers. Much has been written about the indications for this type of surgery as well as specific techniques and results. Little information has been available to physicians concerning the problems and the solutions developed for the actual perfusion. This communication will briefly relate the development of open-heart surgery at the Hospital of St. Raphael in New Haven.

EQUIPMENT

About three years ago we felt that cardiopulmonary by-pass was sufficiently perfected to justify our undertaking laboratory experiments with this technique. After surveying the historical aspects and visiting several of the centers where this was commonly done, we felt that the screen oxygenator developed by Gibbon¹ was the best type available. At that time however, the DeWall oxygenator, or “bubbler,” which utilized the principle of mixing oxygen directly with blood in a vertical column and then “debubbling” through a long spiral tube, was the most commonly used. A third method which evolved from the artificial kidney, utilized the principle of separating the blood from oxygen by thin layers of plastic through which the gases diffused, simulating pulmonary alveoli. Each of these methods possessed some disadvantages not present in the Gibbon machine.

Fortunately, a screen-type oxygenator then became available at a relatively reasonable cost. In this machine, the venous blood flows from the patient by gravity to a collecting chamber, passes through a DeBakey roller pump which is equivalent to the right ventricle, and then goes to the artificial lung. The Gibbon-type lung consists of a series of vertically hanging stainless steel screens down which the blood flows in a thin film to a collecting chamber at the bottom. Oxygen which has been warmed and humidified in a thermostatically controlled unit, passes over these screens, thereby the “blue” venous blood at the top is changed to “red” arterialized blood at the bottom. Each screen is capable of oxy-

genating 320 cubic centimeters of blood per minute. The capacity of the machine can be increased or decreased simply by adding or removing screens. The arterial blood is filtered and returned to the body by a second roller pump equivalent to the left ventricle.

PHYSIOLOGICAL CONSIDERATIONS

Each operation actually presents a physiological experiment in total body perfusion. All venous blood is removed from the body, passed through the artificial lung and pumped back in the body as arterial blood. The following criteria must be met: all parts of the body must be perfused with a normal volume of arterialized blood; there must be an adequate rate of flow; there must be no elevation of central venous pressure; there must be minimal trauma to the blood elements themselves and coagulation must be prevented; there must be no periods of interruption of flow when conversion is made from normal cardiac output to pump output and from pump output to normal cardiac output; body temperature should remain constant; and there must be no alteration in the total blood volume. These are formidable physiological criteria indeed, but they must be satisfied if total perfusion is to be carried out with minimal risk. The technical problems of corrective surgery have been for the most part solved except for a few isolated examples of both congenital and acquired heart disease.

Kirklin and his colleagues at the Mayo Clinic, utilizing a heart-lung machine on the Gibbon principle, have demonstrated that the ideal perfusion must approximate the resting cardiac output under light anesthesia.² This requires a perfusion rate of 2.2 to 2.4 liters per minute per square meter of body surface. Under these conditions, the venous blood should be 70 to 75 per cent saturated with oxygen and the arterial blood 90 to 95 percent saturated. In the average size adult, this will require an output from the heart-lung machine of from 4,000 to 5,000 cubic centimeters per minute. If the venous saturation falls, this of course indicates an increased arterial-venous difference, demonstrating an inadequate rate of flow.

It should be apparent at once, that this is a new type of physiological surgery in which the surgeon is only one member of a team. The team as de-

* Supported in part by grants from the Greenwich Health Association.

veloped by us, consists of a surgeon and assistant, an anesthesiologist and assistant, pump operator and assistant, cardiac physiologist and two nurses. The total team is therefore not as large as that described in some centers but functions very smoothly.

TECHNICAL CONSIDERATIONS

To achieve effective teamwork, technical practice with all the problems involved in anesthesia, pump operation, blood loss studies, and the procedures associated with connecting and disconnecting from the pump, have all required an extensive laboratory experience. In this phase, we spent approximately two years. Laboratory experience continues since we return to the laboratory regularly to work out technical problems related to expanding applications of this method. This is in addition to continuing clinical experience in the operating room. Our total laboratory experience to date has resulted in close to 100 animal perfusions. It should be stated that it is much more difficult to achieve survival in dogs than in humans.

For congenital heart disease, a bilateral thoracotomy is made in the fourth intercostal space from axilla to axilla, dividing the sternum at the level of the fourth costal cartilages. The two halves of the rib cage are separated with retractors, the vena cavae isolated and tapes passed around them within the pericardium. The patient is then totally heparinized by the intravenous injection of heparin in a dose of 1.5 milligram per kilogram of body weight. The arterial cannula is placed in either the left subclavian artery or one femoral artery. If the subclavian is used, the operation is entirely within the thorax and this artery can be sacrificed at the conclusion of the perfusion, thereby eliminating the necessity for closing an arteriotomy. Two suitably sized cannulae are then placed through the right atrial appendage into the superior and inferior cavae and connected via a smoothly machined metallic Y adaptor to the venous line of the heart-lung machine. All air is aspirated with a syringe through a petcock attached to the adaptor. After the cannulae are in place, the pump is started, instituting "partial by-pass." The by-pass is only partial since some of the blood is being picked up by the cannulae in the two cavae but part of it passes around them into the right heart to be pumped in the normal manner. "Total by-pass" is instituted by snug-ging down the tapes compressing the cavae on the cannulae, so that all blood coming toward the heart is taken to the machine through the cannulae. The only blood then remaining in the heart is the venous return from the coronary circulation which enters the right auricle through the coronary sinus plus that passing through the congenital defect. As the right auricle or right ventricle are opened to perform intracardiac surgery, a "coronary sucker" is

placed in the open chamber to aspirate and return this blood to the extracorporeal circulation.

SAFEGUARDS

A review of the safeguards used in the operating room will illustrate the minute detail necessary to assure relatively safe cardiopulmonary by-pass.

Anesthesia consists of a muscle relaxant supplemented by intravenous sodium pentothol and nitrous oxide-oxygen by endotracheal tube.³ With this "balanced" anesthesia, the electrocautery can be used for coagulating bleeding points which speeds up the thoracotomy and diminishes the blood loss. The anesthesiologist uses a Jefferson ventilator to maintain an adequate tidal exchange and release his hands for many other functions.

An electroencephalograph machine is connected to the patient with two leads and is constantly monitored throughout the operation. This is a very sensitive method of determining cerebral blood flow and in our opinion, is imperative if one is to avoid even transient periods of cerebral hypoxia. Interpretation of the electroencephalogram is not difficult as it has been simplified by specific filters for this purpose.

The electrocardiograph machine is always in place and is used prior to and following perfusion to monitor cardiac rhythm as well as during the perfusion, to determine whether damage has occurred to the conduction mechanism within the heart. During induced asystole the electrocardiogram is valueless but is again useful when asystole is relinquished and before the heart has been asked to resume the burden of normal cardiac output.

The temperature of the patient is monitored by a constant reading thermometer with a flexible tip placed in the rectum. An approximately normal temperature is maintained by warming the blood in the extracorporeal circuit and by using a "Thermorite" mattress beneath the patient. This mattress allows circulation of warm or cold solutions to either raise or lower the body temperature as required.

The blood pressure in the patient is monitored during the non-perfusion part of the operation by the usual arm cuff. When the thoracotomy has been made, one internal mammary artery is cannulated with a small catheter and this is connected through a transducer to a recording apparatus which is monitored during the period of perfusion. Since the pumps we use do not produce a pulsatile pressure identical to that of a normal cardiac output, the arterial pressures during perfusion cannot be compared directly with the normal arterial pressure.

The arterial pump line pressure is also monitored so that the pump operator is instantly aware if there is angulation of the cannula in the artery or any ob-

struction to the arterial line in the operating field. If this should occur, the pump operator notifies the surgeon immediately and proper adjustments are made.

The blood loss is calculated throughout the procedure by the use of dry sponges of known weight. In addition, the table suction goes to 1,000 cubic centimeter graduates beneath the table, which can be read at intervals of five or 10 minutes in order to calculate the blood loss by aspiration. All saline used for irrigation or clearing of suction tubes is carefully measured and reported to the circulating nurse who keeps a running account of the blood balance. The blood is replaced by the anesthesiologist so that at no time is a deficit in the circulating blood volume allowed to occur. Blood may be replaced from the heart-lung machine if a sudden loss occurs requiring rapid arterial transfusion.

Total heparinization to prevent blood clotting, is effected just prior to insertion of the arterial cannula and the blood which is used to prime the heart-lung machine is also heparinized. At the conclusion of perfusion, a sample of blood is obtained for protamine titration by the laboratory. Forty per cent of the calculated dose of protamine necessary for neutralization of the original heparin is then given and a second dose is given after the laboratory reports the precise amount required. Since coagulation defects may occur with an overdose of protamine, we have considered protamine titration essential and have to date not had any postoperative coagulation problems.

The defibrillator and the cardiac pacemaker are constantly available in the room. In all operations involving the possibility of interference with the conduction system in either the atrial or ventricular septums, a stimulating electrode is placed in the ventricular muscle and brought out through the wound. A second neutral electrode is placed subcutaneously so that if there is any interference with cardiac rhythm either immediately at the operating table or subsequently, a normal rhythm can be stimulated. A transistorized pacemaker is now available which weighs only a few ounces and may be attached to the patient to permit ambulation.

Check lists of all the steps essential to smooth completion of the entire operation have been made and are used on each procedure by the surgical

members of the team, the anesthesiologists, the pump operators and the nurses. A final and most important check list is read by the circulating nurse after the arterial cannula has been placed and just prior to inserting the venous cannulae. This list makes certain that all equipment is in readiness and all observations have been made so that there will be no delays during the important period of perfusion. The perfusion time should always be kept as short as is consistent with technically satisfactory surgical repair.

Speech patterns have been deliberately developed and practiced by the team so that communications will be clear even under stress of operative difficulty. Each query and report is acknowledged so that all members know that they have been heard and understood. These speech patterns have added greatly to clear communication.

SUMMARY

We have briefly described our solutions to some of the problems of total body perfusion for open-heart surgery. These techniques are not original but have been modified from those developed elsewhere. It should be emphasized that safe cardiopulmonary by-pass using extracorporeal circulation, can only be achieved after laborious and meticulously detailed animal laboratory experience.

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ADDENDUM

Technical advances are occurring so rapidly in this field that many changes have been made since this article was written. For example, a "blood heat exchanger" now makes temperature control simple and absolute. All simplification however, is possible only by closely adhering to the physiological principles outlined.

Survey Of Deaths Associated With Anesthesia In Connecticut

A Review Of 120,935 Anesthetics

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Death associated with the administration of anesthesia is but one of several factors contributing to the overall surgical death rate. The frequency with which surgical deaths are associated with anesthesia has, however, been generally poorly appreciated until relatively recently when, for the first time, several objective and statistically valid studies appeared dealing with this subject.^{1,2,3} The present study was instituted by the Anesthesia Study Committee of the Connecticut State Society of Anesthesiologists for the purpose of obtaining more information concerning the nature and frequency of such deaths and for the purpose of providing material which might prove of value in the prevention of such deaths. The following report presents the methodology and statistical results of the survey. The application of these results to the prevention of such deaths will be the subject of subsequent communications.

DATA were obtained from Connecticut hospitals which participated in the survey over a two-year period extending from September 1, 1956 through August 31, 1958. The hospitals had bed capacities ranging from approximately 100 to over 800. The number of anesthetics administered annually in these hospitals varied from 4,000 to over 20,000. In order to maintain as complete anonymity as possible and so to retain the objectivity which prevailed during the study, the participating hospitals need not be named. The data obtained consisted of the total number of anesthetics administered in each hospital, plus a review of *all* deaths (from any cause whatsoever) if death were preceded by the administration of an operative anesthetic at some time during the final admission. Each such death was then reviewed by a member of the Anesthesia Study Committee as soon as possible following the demise of the patient. All members of the Committee were practicing anesthesiologists. Consultations with personnel who actually administered the anesthetic, with pathologists, surgeons, and internists were included when indicated. By reviewing deaths as soon as possible after they had occurred, the inevitable inaccuracies of a survey depending on analysis of "stale" records were thereby eliminated. Following this preliminary re-

view, the reviewing anesthesiologist assigned each postanesthetic death to one of five categories, namely: 1) death due to patient's disease (e.g. carcinomatosis); 2) death due to surgical causes (e.g. hemorrhage); 3) death due primarily or entirely to anesthesia; 4) death in which anesthesia significantly contributed to categories one or two; and, 5) death due to doubtful causes. Deaths classified as being due to patient's disease or to surgery were eliminated from further study. Deaths assigned to categories three, four, and five, were, on the other hand, abstracted in detail and presented for final classification to the entire Committee at one of its regularly held conferences. At these conferences each death was discussed thoroughly and objectively and finally classified by majority vote as an "anesthetic death," an "anesthesia contributory death," or "death due to other causes." This report deals with "anesthetic deaths" and "anesthesia contributory deaths."

All anesthetics administered by regular anesthesia personnel (nurse anesthetists, residents in training, and staff anesthesiologists) were included in the survey. The majority of cases were anesthetics for surgical procedures although diagnostic and therapeutic nerve blocks were also included. Excluded were all local or topical anesthetics administered by the surgeon. Excluded also were neonatal deaths unless the infant received operative anes-

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thetia. The study being concerned only with death, no statistics were included concerning the frequency of cardiac massage, whether successful or not.

No attempt was made to relate frequency of death associated with anesthesia to particular anesthetic agents or technics. The frequent use of more than one anesthetic agent or technic would have made such statistics difficult to obtain and of dubious subsequent value. Similarly, no statistical attempt was made to relate deaths to age, sex, operative procedure, hospital, or training of the anesthetist. Complete patient anonymity was maintained throughout, there being no recording of name, unit number, or hospital of origin of the case.

Classification of deaths as "anesthetic" or "anesthesia contributory" is admittedly subjective in nature and so liable to certain degrees of error. However, in the absence of any objective criteria either presently available or available in the foreseeable future, this classification served satisfactorily as a method for obtaining the desired information as to the role, if any, anesthesia played in the death of a particular patient. Before defining these terms the basic philosophy guiding the Committee should be explained. This philosophy held that none of the present anesthetic agents or technics is perfect. They all represent "physiologic trespass" to some extent. Accordingly, certain deaths are a reflection not of any error of omission or commission, but are instead merely an indication of limitations inherent in our present knowledge and technics. Ultimately all deaths associated with anesthesia can and should be preventable, especially since they are by definition iatrogenic in origin. But the mere fact that these deaths are presently not all preventable should not deter one from implicating anesthesia as a causative factor when indicated. Failure to accept the role of anesthesia in certain deaths has led in the past and will continue to lead to a frame of mind where the patient himself or an act of God are blamed for a patient's death. This represents a philosophical and therapeutic *cul de sac* from which no advance can be made in solving what will be shown to be an important public health problem.

An "anesthetic" death was defined as one in which the anesthetic agents or technics were clearly the single most important factor leading to the death of the patient. "Anesthesia contributory" deaths were those deaths in which there was some underlying factor present which in itself would not reasonably have been expected to result in the patient's death but which, when combined with anesthesia, did result in death. In many of these latter cases the underlying factor was patient's disease (e.g. coronary arteriosclerosis) but it was felt that

even though the patient was not an ideal risk pre-anesthetically, such patients should be able to stand the stress and physiological derangements attendant upon anesthesia if the anesthetic were ideal.

RESULTS

During the two-year period studied, 120,935 anesthetics were administered in the participating hospitals. During this period of time there were a total of 69 deaths which were ascribed in part or in whole to the anesthesia. Thus the overall anesthetic death rate was one in 1,752 or, in other words, for every 1,752 persons given an anesthetic one died as the result of having received the anesthetic. Of the 69 deaths, 31 were classified as "anesthetic" deaths, and 38 as "anesthesia contributory" deaths. It being impossible to review all these deaths in detail, they are divided into categories and presented with representative examples in each category for the sake of brevity and clarity.

ANESTHETIC DEATHS

Due primarily to local anesthesia. There were three such deaths. In none was there evidence of "hypersensitivity" or "allergic" response to the local anesthetic agent, the causative factor being primarily overdosage.

Cardiac arrest occurred in a 62-year-old male with complete heart block immediately following injection of 700 mg. of lidocaine (35 cc. of a two per cent mixture) into the caudal canal prior to cystoscopy.

Due primarily to respiratory inadequacy. The most frequent single cause of death due to anesthesia was the inability to maintain normal pulmonary ventilation. Fifteen deaths were ascribed to this one cause. In three of the 15 patients death was the result of vomiting and aspiration of the vomitus during anesthesia.

A 28-year-old woman having a vaginal delivery under general anesthesia vomited and aspirated during the anesthesia, dying on the fourth postpartum day of pulmonary complications.

A 67-year-old male died of respiratory inadequacy two hours after vomiting and aspiration of the vomitus during induction of general anesthesia for repair of postoperative abdominal wound dehiscence.

In two patients death was due to respiratory depression which, compensated for during the period of operation, extended into the postoperative period, the depression being a pharmacological one associated with the drug(s) used to produce anesthesia.

A 43-year-old obese, hypertensive woman had respiratory inadequacy belatedly recognized and

inadequately treated in the Recovery Room, with death occurring one hour following uneventful cholecystectomy performed under thiopental-nitrous oxide-meperidine-succinylcholine anesthesia.

In three cases death was ascribed to chronic but unrecognized pulmonary hypoventilation during the period of anesthesia and operation, the depression again being a pharmacological one due to the anesthetic agent (s) used to produce anesthesia.

A 69-year-old woman with intractable intercostal neuralgia suffered cardiac arrest during rhizotomy. Inadequate respirations throughout anesthesia (thiopental-nitrous oxide-meperidine-curare) were clinically not appreciated nor compensated for.

In seven instances death was due to organic obstruction involving the respiratory tract. In two of these seven patients, the obstruction was due to technical problems associated with anesthetic equipment.

Cardiac arrest occurred in a 67-year-old woman having a colectomy due primarily to obstruction of the endotracheal tube.

In one of the seven, death was due to soft-tissue (pharyngeal) obstruction following removal of the endotracheal tube. In another, a child with pre-existing laryngeal edema, complete laryngeal obstruction developed during induction of general anesthesia prior to tracheotomy. In one patient, a child with leontiasis ossea and fibrous dysplasia apparently involving the trachea and bronchi, the induction of anesthesia was associated with tracheal collapse even though preanesthetically there had been no respiratory symptoms. In two of the seven deaths in this category the respiratory obstruction leading to death was due primarily to intractable bronchospasm. In one of these, a patient having an esophagectomy, there was a known history of severe asthma for 45 years. In the other, there was no history of asthma, but bronchospasm appeared following the induction of anesthesia and, complicated by extreme obesity and the Trendelenburg position, led to the patient's death during operation.

Due to cardiovascular causes. In 10 patients, death was primarily the result of cardiovascular collapse. In one patient this was probably due to direct depression of the myocardium due to the anesthetic agent.

Cardiac arrest occurred in a 47-year-old male with moderately symptomatic mitral insufficiency immediately following induction of anesthesia (thiopental-nitrous oxide-succinylcholine) prior to thyroidectomy for non-toxic nodular goitre (respiratory obstruction never present).

In two patients cardiovascular collapse occurred as the result of inadequate cardiac output secondary to decreased venous return to the heart. In one of these, the decrease in venous return was due to the induction of general anesthesia and use of the prone head-up position in the presence of a severely decreased blood volume (the pre-operative hematocrit in this patient was 28 per cent). In the second patient, total blood volume was adequate but circulating blood volume was decreased to the point of cardiac arrest following use of the slightly head-up position when an inadvertently high spinal anesthesia had produced nearly complete sympathetic denervation.

In two patients, death was due to acute coronary insufficiency associated with anesthesia.

A 69-year-old hypertensive diabetic male with known coronary artery disease became hypotensive immediately following induction of general anesthesia for cholecystectomy. The hypotension became refractory to treatment and cardiac arrest occurred at the conclusion of operation.

In five patients cardiac arrest occurred in situations where the anesthesia was clearly implicated but the exact etiology of the death could not be determined.

Sudden cardiac arrest occurred in a previously asymptomatic 52-year-old woman during closed reduction of a Colles' fracture during brief and apparently uneventful thiopental-nitrous oxide anesthesia.

Sudden cardiac arrest occurred in a 55-year-old male with a perforated peptic ulcer immediately following induction of spinal anesthesia and prior to start of operation.

A 58-year-old diabetic male had a cardiac arrest at the time of skin incision following smooth and uneventful induction of general anesthesia. Proposed surgery was to be lumbar sympathectomy for peripheral arterial insufficiency.

Due to other causes. In one patient death was due to hyperthermia associated with anesthesia.

A 19-month-old child developed hyperthermia of 104° F during general anesthesia for repair of a cleft palate on a hot day in an operating room without air conditioning. Postoperatively hyperthermia did not respond to therapy, and became worse (temperature over 106° F). Death occurred in the immediate postoperative period.

In two patients death occurred following failure to regain consciousness following general anesthesia. In one, a 51-year-old man having excision of the left lower lobe for carcinoma, carbon dioxide narcosis due to respiratory acidosis was probably a factor,

death occurring approximately 48 hours postoperatively. In the other, an 87-year-old woman who died 75 days following general anesthesia for a hip fracture, the failure to regain consciousness was related to irreversible cerebral vascular changes precipitated by the anesthesia, the course of which was characterized by several episodes of arterial hypotension and one episode of respiratory obstruction.

DEATHS IN WHICH ANESTHESIA WAS CONTRIBUTORY

Due to cardiovascular causes. Twenty-one of the 38 deaths in which anesthesia was considered a significant contributory factor were cardiovascular in nature. Eight of these were due to coronary insufficiency in the postoperative period demonstrated either electrocardiographically or by autopsy. While the exact pathogenesis of lesions such as coronary artery thrombosis following anesthesia and surgery is not clear, the frequency with which patients with pre-existing coronary artery disease died of myocardial infarctions relatively shortly after anesthesia and operation suggested that the relationship was causal rather than casual. When discussing a single patient, the argument could logically be advanced that the patient might have suffered a myocardial infarction at that time even though he had not received an anesthetic and been subjected to operation. Such an argument becomes untenable, however, when the sequence of anesthesia and coronary occlusion occurs as often as it did in this series. Although difficult to prove, these deaths have been classified as deaths in which anesthesia contributed to the demise of the patient. Such a classification seemed, in the light of our knowledge concerning the cardiovascular effects of anesthetics, highly reasonable. In addition it should be mentioned that such deaths eventually can and must be prevented, but in order for this to be accomplished some one person concerned with the care of the surgical patient should assume responsibility for attacking the problem. The anesthesiologist is in the most advantageous position for doing so, and classifying these deaths as "anesthesia contributory" will serve as an index of the scope and nature of his problem. Typical examples of deaths due to coronary occlusion in association with anesthesia are as follows:

A 76-year-old hypertensive male with known coronary artery disease had an uneventful general anesthesia for cholecystectomy but developed a progressively severe arterial hypotension upon leaving the operating room, with death due to coronary occlusion six hours postoperatively.

A 55-year-old male with two previous coronary occlusions died of myocardial infarction six hours following uneventful general anesthesia for drainage of an abdominal abscess.

A 54-year-old hypertensive male with three pre-

vious coronary occlusions died of myocardial infarction five hours following general anesthesia for an exploratory laparotomy, the latter part of the operation being characterized by intractable arterial hypotension.

A 74-year-old male with bundle branch block died 26 hours after a mid thigh amputation unsuccessfully attempted under local anesthesia and finally accomplished with thiopental (1,200 mg.)-phenergan (25 mg.)-nitrous oxide. The period of general anesthesia was associated with arterial hypotension.

In addition to the eight patients who died of demonstrable coronary insufficiency, there were six patients who died of progressive deterioration of the cardiovascular system in whom organic occlusion of the coronary arteries could not be demonstrated but in whom the anesthesia appeared to contribute, often together with other factors, to the demise of the patient.

A 54-year-old male in previously good health but suffering from fluid and electrolyte imbalance at the time of operation had spinal anesthesia supplemented by thiopental, phenergan, nitrous oxide, and cyclopropane for repair of a ventral hernia. Immediately postoperatively cardiovascular collapse ensued, became unresponsive to therapy, and resulted in the patient's death eight hours following operation.

A 67-year-old male with a history of angina and hypertension developed pulmonary edema one hour postoperatively and died four hours later following general anesthesia for a transverse colostomy.

A 60-year-old toxic, dehydrated, hypotensive female had a cardiac arrest 20 minutes following completion of an emergency cholecystectomy.

The remaining seven patients in this group of 21 died from miscellaneous cardiovascular causes. In one, a young male in shock with a left hemothorax, cardiac arrest developed following induction of anesthesia and positioning for a left thoracotomy. In another, intractable hypotension progressing to ventricular fibrillation developed in a patient with a dissecting abdominal aneurysm following induction of general anesthesia. In a third patient, the induction of general anesthesia in the presence of inadequate blood volume due to gastric hemorrhage led to immediate severe arterial hypotension which never responded, the patient remaining in shock and dying 48 hours postoperatively. In a fourth patient induction of spinal anesthesia for an aortic embolectomy following a coronary occlusion resulted in severe hypotension which, together with anuria, persisted until death 24 hours postoperatively. In a fifth patient, a previously healthy 28-

year-old woman with intestinal obstruction, arterial hypotension was present preoperatively but became worse during general anesthesia and operation, culminating in pulmonary edema and death 45 minutes postoperatively. In two patients death occurred at a considerable period of time following operation due to cerebrovascular accidents apparently sustained during the period of anesthesia. One of these was a severely hypertensive 73-year-old male, the other a 39-year-old male who had a thrombosis of the internal carotid artery following brief (three minute) occlusion of this vessel during hypothermia and induced hypotension for a neurosurgical procedure.

Due to respiratory inadequacy. Death due to respiratory causes occurred in six patients in whom anesthesia was one of several significantly contributing factors. In three of these, death was due to overwhelming pulmonary infection accentuated by, if not caused by, the anesthesia.

A 71-year-old male having a pneumonectomy died of respiratory inadequacy 1½ hours following operation, the anesthesia having been complicated by the inability to prevent secretions from draining from the upper (diseased) lung into the healthy lower lung while the patient was in the lateral position.

A five-month-old boy with a temperature of 101° F preoperatively had an uneventful general anesthesia (no aspiration) for resection of an obstructing Meckel's diverticulum. Postoperatively, the temperature rose to 108° F, with death in eight hours. Autopsy showed acute severe bilateral bronchopneumonia.

In two patients, inadequate ventilation due to pharmacological depression extending into the postoperative period was considered to be a contributing factor. In one patient, an 80-year-old female almost moribund from gall bladder ileus, the respiratory depression was fairly evident but was only one of several factors leading to death. The other was more complicated.

A 39-year-old previously healthy woman had an uneventful repair of a ventral hernia under thio-pental-nitrous oxide-succinylcholine anesthesia. Postoperatively she was considered to be doing well but about four hours postoperatively respiratory distress became evident. This became progressively worse, with death occurring an hour later.

In one patient death was due to massive atelectasis seven hours after an anesthesiologically uneventful pancreatectomy performed under cyclopropane anesthesia. Heavy postoperative medication with analgesics was also a factor in this case.

Due to liver failure. In four instances, death following anesthesia and operation was due to liver failure. Because of the known adverse effects of anesthetic agents and technics on liver function, especially in the presence of abnormal hepatic function, these deaths were classified as "anesthesia contributory." Examples of such deaths are the following two cases:

A 69-year-old woman with normal preoperative liver function tests died of liver failure eight days following splenectomy for hypersplenism performed under cyclopropane-ether anesthesia.

A 51-year-old male developed liver failure on the fourth day following gastrectomy for bleeding ulcer performed under cyclopropane anesthesia. Death on the seventh postoperative day.

Due to central nervous system causes. Death in four patients occurred due to disorders of the central nervous system which were accentuated by if not caused by anesthesia. In two of these, massive cerebral edema was demonstrable but the exact cause of the edema could not be determined.

A 41-year-old male had an appendectomy performed under cyclopropane anesthesia. The course of the anesthesia was complicated by marked arterial hypertension. Twenty minutes after completion of the operation the patient became apneic. Spontaneous respirations never returned and unconsciousness persisted, death occurring on the third postoperative day. Autopsy showed severe cerebral edema with cerebellar and pontine infarctions and herniation of the uncinate gyrus.

In an additional two patients, death followed failure to regain consciousness, in one 12 hours postoperatively, in the other seven days postoperatively. Both of these were complicated cases with patient's disease a significant factor, but in both the anesthesia contributed to the depression of central nervous system activity.

Due to other causes. The remaining three deaths in which anesthesia was a contributing factor were as follows:

A 49-year-old male died of an infected thoracotomy incision three months after cardiac arrest which developed during debridement of an infected foot under general anesthesia.

A 64-year-old woman who had been on massive doses of adrenal cortical preparations for at least seven years because of rheumatoid arthritis had an emergency gastrectomy for bleeding under general anesthesia. Immediately following operation intractable arterial hypotension developed, with death on the first postoperative day. At autopsy each adrenal weighed three grams.

A 60-year-old male in severe respiratory distress and under heavy sedation because of fractured ribs became apneic and died shortly after relief of pain of the fractured ribs by means of intercostal nerve blocks.

DISCUSSION

The present study indicates that in Connecticut surgical anesthesia is associated with death ascribed to the anesthesia once in every 1,752 anesthetics. Statistically this is approximately the same as the experience reported by others. Beecher and Todd¹ found in a survey of 599,548 anesthetics that there were 384 anesthesia deaths, a ratio of one in 1,560. Hingson and his co-workers² reported 59 deaths associated with anesthesia in a series of 136,043 anesthetics, a ratio of one in 2,300. Dornette and Orth³ found in a review of 63,105 anesthetics that in 46 cases death was associated with anesthesia, a ratio of one in 1,371. The problem, then, is not a local one but one which involves surgical patients everywhere.

A death rate of one in 1,752 emphasizes several points. First, in certain operative procedures the anesthetic risk now constitutes a considerable portion of the overall risk to which a surgical patient is exposed. Thanks to blood banks and antibiotics, the surgical death rate for certain so-called "minor" operations has dropped almost to the vanishing point. A cystoscopy, a reduction of a Colles' fracture, or a hemorrhoidectomy are not in themselves particularly dangerous operative procedures. But the anesthesia administered for them can and occasionally does prove fatal. The adage that there are minor operations but there are no minor anesthetics may be time-worn by repetition, but it is nevertheless an accurate and valuable indication of the present-day relationship between surgical and anesthetic death rates for certain cases.

Another point emphasized by the present study is the fact that on a purely statistical basis a single individual dealing with anesthetized patients may go for considerable periods of time without having any difficulties associated with anesthesia. The impression may then arise that a particular method of anesthetic management or, indeed, anesthesia itself represents no particularly significant problem. This philosophy is stated in the expression "I've been doing so-and-so for years now and never had any trouble so it must be safe" and the expression "we will just give you a shot of Pentothal for such a short and minor procedure even though you have just eaten." True safety based on sound physiological and pharmacological principles, proven by statistically adequate figures, is not synonymous with the ability to "get away with" a calculated risk a certain number of times. The mere fact that one has successfully assumed a calculated risk 500 times in a

row is not in itself any criterion of safety, nor is it any consolation if the 501st case results in a fatality. The management of each patient should be strictly individualized with safety of the patient as the first consideration. Comfort of the patient as well as anesthetic and surgical convenience must be relegated to purely secondary roles.

But perhaps the most striking implication of a death rate of one in 1,752 in association with anesthesia becomes apparent when such a figure is applied on a nation-wide basis. There are approximately 8,000,000 anesthetics given annually in this country. If one assumes that the death rate throughout the country is approximately the same as determined in this study (a reasonable assumption in view of other published reports), then we are dealing with an annual national anesthetic death rate in the neighborhood of 5,000. This abruptly removes the question of anesthetic deaths from the realm of the purely academic and places it in its proper perspective as a problem in public health. It is a problem which, although of greater magnitude than other more widely publicized causes of death, is generally poorly and infrequently recognized. The reasons for this are multiple, but they include a reluctance, for medico-legal reasons, to list an anesthetic death as such on the death certificate, as well as a not infrequent inability to recognize an anesthetic death when it occurs. But the problem is real, and failure to recognize that such a problem exists will not solve it.

What can be done towards solving it? A great deal can be accomplished by research. A great deal can also be accomplished by expanded teaching programs. But perhaps even more important is the necessity for readjusting our whole approach to the problem to the extent that deaths associated with anesthesia are viewed objectively and realistically, that they are recognized for what they are, and that an honest and serious attempt be made to prevent them. The present emotional and litigious reaction of the medical and legal professions, as well as of the lay public, to the words "anesthetic death" probably does more to prevent an effective attack on the problem than any other single factor. As long as death associated with anesthesia implies that someone *must* morally or legally be blamed, the accumulation of accurate statistics is prevented or made extremely difficult. And as long as this attitude persists, little can be done to help future patients. The situation is analogous to an attempt to eliminate syphilis at a time when patients would not admit they had syphilis because of the social stigmata applied to the disease. The only difference is that the physician attacking syphilis was not undergoing moral censure by his associates or legal attack by his patients for admitting that such a disease existed.

It is for the purpose of establishing such an atmosphere with regard to anesthetic deaths as well as for the purpose of providing statistics that the present report is given. It is hoped that such an attitude, plus further statistics, will allow an effective solution to the problem to be developed. Specific suggestions as to recognition of anesthetically dangerous situations, as well as their management, will be the subject of further communications.

SUMMARY

A review of all anesthetics in selected Connecticut hospitals over a two-year period of time showed the anesthetic death rate to be one in 1,752. A sum-

mary of typical case reports is given, together with an analysis of the implications of such an anesthetic death rate and a plea for better understanding of the problem.

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Infection With Enteroviruses

One result of the application of tissue culture techniques to studies of poliomyelitis was the discovery that "many patients who had illnesses hitherto described as 'nonparalytic poliomyelitis' were infected with either Coxsackie or enteric cytopathogenic human orphan (Echo) viruses and not with poliovirus," observes Dr. Donald M. McLean, Toronto, who notes the availability of descriptions of more than 40 antigenic types of enterovirus, including the poliomyelitis, Coxsackie, and ECHO groups of viruses.

Particularly in Canada and the northern United States, two special features have been recently observed in epidemic spread of enteroviruses. A given antigenic virus is predominant in one season, but "a completely different antigenic type becomes dominant one or two seasons later." Also, "the symptomatology produced following infection with an enterovirus may vary from an uncomplicated aseptic meningitis, pleurodynia, an exanthem which occurred either alone or was accompanied in some instances by aseptic meningitis, or pharyngeal lesions, to benign pericarditis in children and adults or fatal myocarditis in newborn infants."

In Minnesota and Iowa during 1956 the only clinical manifestation of infection with Coxsackie B₅ virus was aseptic meningitis. During 1958 in southern Ontario, on the other hand, infection with the same virus was associated with a wide variety of clinical syndromes, including pericarditis.

"A wide spectrum of syndromes may be produced following infection with one serotype. . . . It is of paramount importance to obtain additional evidence that a particular virus which was isolated from the feces of a patient caused an infection at the time of his illness." To do this it is necessary to isolate the same antigenic type of virus far from the alimentary tract or by serologic means. To date, very few serologic types of enterovirus have been isolated from patients during epidemics. (*J. Pediat.* 54:823, June, 1959.)

Esophagoscopy During Active Upper Gastrointestinal Hemorrhage

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THE need for accurate localization of upper gastrointestinal hemorrhage continues. Perhaps this need has become even more urgent with continuing advances in cardiovascular surgery. This is especially true for patients presenting with a clinical diagnosis of cirrhosis of the liver. Their prognosis is radically altered when esophageal varices are discovered, because of the impending hazard of a fatal hemorrhage. Before development of the Sengstaken tube, the demonstration of esophageal varices had very little diagnostic significance; in fact, the presence of varices was an indication that nothing more could be done for the patient. Since all patients with cirrhosis of the liver do not have esophageal varices, and all cirrhotic patients with esophageal varices do not bleed from them; esophagoscopy for the cirrhotic patient with active upper gastrointestinal hemorrhage becomes an essential diagnostic procedure.

Enquist et al¹ state that patients with cirrhosis of the liver frequently bleed from lesions other than varices. This situation leads to difficulty in handling the acute bleeding episode, for the management of bleeding esophageal varices differs considerably from the management of bleeding lesions within the stomach or duodenum. From the studies of Sanz et al² and the statistics of Preble,³ Brockus,⁴ Halsted et al,⁵ Palmer and Brick;^{6,7} it has been estimated that in cirrhotics with hemorrhage, 15-20 per cent will not have esophageal varices as an explanation for their bleeding. Palmer and Brick⁶ demonstrated that approximately 30 percent of these patients had more than one potential source of bleeding in the esophagus, stomach, or duodenum. Fainer et al⁸ are in agreement and present figures comparing favorably with those of Palmer and Brick. According to Lipp et al,⁹ the incidence of peptic ulcer was found to be significantly greater in patients with cirrhosis of the liver. Welch¹⁰ found varices in 22 per cent of all bleeding patients whereas most of the remaining cases were found to have gastric or duodenal ulcers. In a study of 111 cases of upper gastrointestinal hemorrhage, Smythe et al¹¹ found esophageal varices to be the source of hemorrhage in only 11 per cent. The transient state of varices

in patients with cirrhosis of the liver has been recognized,^{12, 13, 14} and the incidence estimated to be 8 to 10 per cent. The demonstration of esophageal varices by x-ray or endoscopy prior to a given instance of bleeding is not particularly reliable as an assumption that the source of bleeding must necessarily be from esophageal varices. The diagnosis of esophageal varices by esophagoscopy, although accepted by most as the superior method, has not become popular even though extensive use of the procedure by Palmer and Brick⁷ has repeatedly demonstrated its safety. Palmer¹⁵ further states that the danger of adequate examination is insignificant compared with the hazards of treatment without a knowledge of the nature of the bleeding lesion. Palmer and Scott¹⁶ state that "In clinics the world over, the main deterrent to diagnostic studies of the patient with massive upper gastrointestinal hemorrhage—seems to be the fear of aggravating hemorrhage—To date nothing has been observed to suggest that the 'Vigorous Diagnostic Approach' has aggravated hemorrhage or in any way compromised the patients chance for survival." "Blind emergency gastrectomy—so frequently resorted to of necessity with the realization that the chance that it will prove to be the proper procedure depends on the tenuous statistic that most bleeding is due to duodenal ulcer—becomes obsolete."

The purpose of performing esophagoscopy in the presence of active upper gastrointestinal hemorrhage is not only to determine the presence or absence of esophageal varices but to see if they represent the source of bleeding. This information at the time of hemorrhage and before treatment is undertaken is highly desirable and can be obtained by no other means short of major surgery. Esophagoscopy without the aid of previous x-ray or fluoroscopic studies places the responsibility on the endoscopist to avoid the anatomical and pathological deviations from the normal structure.

X-rays of the esophagus performed during a bleeding episode are grossly misleading. Emergency x-rays have been reported by Welch¹⁰ to be a satisfactory means of diagnosis in 75 per cent of those patients bleeding from varices or ulcer. Radiologic demonstration of varices in cirrhotics has

been estimated in the order of 15-50 per cent according to Schatzke,¹⁷ Templeton,¹⁸ and Zaino.¹⁹ Brick and Palmer⁷ in a study of 150 cases of histologically proven cirrhotics, place the figure at 12.9 per cent. Nelson²⁰ has estimated that under the best circumstances, radiologic demonstration of esophageal varices is in the range of 30-50 per cent of cases known to have them.

The insertion of a Sengstaken tube as the only diagnostic procedure for determining the site of bleeding has been condemned. The patient with cirrhosis of the liver, bleeding from a gastric or duodenal ulcer, who receives a Sengstaken tube for diagnostic purposes is in great jeopardy.²¹ Frequently the bleeding will cease while the tube is in place. The recurrence of bleeding upon removal of the Sengstaken tube has often been fatal for further diagnostic measures may not be employed and the re-inserted tube fails to control the bleeding.

Blood ammonia studies are helpful in evaluating liver function and may indicate enzymatic breakdown of a large amount of blood in the intestinal tract.^{22, 23} High blood ammonia levels suggest the presence of varices, but give no reliable information as to the source of a given episode of upper gastrointestinal hemorrhage.

PROCEDURE

The team approach to the problem of gastrointestinal hemorrhage was employed in most instances. The patient was admitted on the medical service where treatment of blood loss and routine diagnostic procedures were performed. The interested parties were alerted including cardiovascular surgery, otolaryngology, general surgery and anesthesiology.

Esophagoscopy was performed when possible as an emergency procedure in the general operating room under topical anesthesia. The patient was well secured on a regular operating table and positioned with the shoulders well up on the headboard so that moving the headboard provided space for adequate manipulation of the head once the esophagoscope was inserted. Premedication consisted of Demerol 50-100 mgm and atropine sulfate grains 1/100 IM one-half hour prior to examination. The patient was placed in slight Trendelenberg position and the mouth and pharynx suctioned with a tonsil suction tip to evoke the gag reflex and empty the stomach of accumulated fresh and clotted blood. A #30 Fr. Ewald stomach tube was used on occasion for this purpose and the stomach irrigated with ice water. Following this the patient was elevated to a semi-sitting position and the nose, nasopharynx mouth, pharynx, larynx, and upper trachea anesthetized topically with one per cent pontocaine.

While the patient was being anesthetized, a Jackson 45 cm, 9 mm esophagoscope was assembled. Two suction tips were selected, one with an open end and the other with a velvet-eye tip. Large basket type foreign body forceps were selected for removal of blood clots. Two suction lines were established, one to the side arm of the esophagoscope, the other to the suction tip. All suction devices were carefully checked before starting the procedure. The anesthesia service selected a suitable inflatable-cuff type endotracheal tube with necessary equipment for oral intubation and administration of oxygen or a volatile anesthetic.

The procedure to this point was varied somewhat depending upon the status of the patient and the rapidity of the bleeding. Many patients were in such a state of collapse as to offer no resistance to simple passage of the esophagoscope without pre-medication or topical anesthesia. For the more resistive patient, help was provided by the anesthesia department in the form of intravenous demerol or a rapid acting anesthetic gas at the time of insertion of the scope.

Topical anesthesia was applied to the larynx and upper trachea not only to reduce the tendency to cough during the examination, but to render the area insensitive for insertion of an endotracheal tube. The need for airway protection with the endotracheal tube was usually determined by the amount of active bleeding. Once the endotracheal tube was in place, esophagoscopy was performed with safety and ease, and the patient given oxygen or if necessary a rapidly acting volatile anesthetic.

Most patients presenting on an emergency basis with active upper gastrointestinal bleeding had no x-rays on file in the hospital. It was therefore essential that the procedure be performed with due caution and under direct vision. The open end esophagoscope was passed to the cricopharyngeal sphincter and if resistance was encountered, a flexible esophageal bougie was carefully inserted for a distance of 4-5 cm and the esophagoscope passed on over it through the sphincter. At this point suction to the side arm of the scope was turned on. The scope was carefully advanced keeping the esophageal lumen in view at all times. Visualization was helped initially by having the head of the table elevated 15-20°. The volume of blood could always be removed through the suction attached to the side arm of the scope with occasional use of the metal suction tip to clear the field. The foreign body forceps and the open-end suction tip were found helpful in removing large blood clots. Varices when encountered were carefully examined for evidence of recent or active bleeding. On occasion it was necessary to pass the esophagoscope back and forth through the cardiac sphincter and use various degrees of Trendelenberg and reverse Trendelenberg

position to locate the exact source of bleeding in the distal esophagus. Side to side movement of the scope and changing the location of the bevel were helpful. Ice water was flushed through the scope on occasion to reduce the bleeding when it seemed to come from every where at once.

The Sengstaken tube was inserted as soon as the diagnosis of bleeding esophageal varices had been established. The previously anesthetized nasal route was employed and the tube advanced to the hypopharynx before removing the esophagoscope. With the patient in a semi-sitting position, the esophagoscope was removed and the Sengstaken tube advanced. The endotracheal tube cuff was deflated prior to advancing the Sengstaken tube through the cricopharyngeal sphincter. A laryngoscope and laryngeal foreign body forceps were occasionally helpful in starting the Sengstaken tube on through this sphincter. In those instances where active bleeding was not encountered in the esophagus, a nasogastric tube was inserted and the elected medical or surgical treatment followed.

DISCUSSION

Controlled studies¹⁴ have repeatedly demonstrated esophagoscopy to be more reliable than x-ray as a means of detecting esophageal varices in a cirrhotic patient presenting without a history of upper gastrointestinal bleeding. The degree of reliability was nearly doubled in those patients presenting with a history of upper gastrointestinal bleeding. It seemed reasonable to believe that esophagoscopy performed in the presence of active upper gastrointestinal bleeding should leave little doubt as to the presence or absence of esophageal varices and whether esophageal varices represented the actual source of bleeding.

Approximately seventy-five cases of upper gastrointestinal hemorrhage were esophagoscoped at the time of actual bleeding using the technique described above. In no instance was the procedure abandoned because of an unmanageable patient, respiratory distress, or excessive bleeding. In no instance was it necessary to pass the Sengstaken tube for control of bleeding prior to esophagoscopy. In no instance was it impossible to define the status of the esophagus both with respect to the presence of varices or whether observed varices were the source of bleeding. In those cases where x-rays had demonstrated varices, they were quite easy to see and large in size. Localization of the source of bleeding beyond the confines of the esophagus has not been considered for this paper. The details of esophagoscopy findings in the seventy-five cases are to be reported in a separate paper.

The dangers of esophagoscopy in cirrhotic patients with varices have been stressed by various authors. Welch¹⁰ states that esophagoscopy in the

presence of active bleeding is difficult and that identification of the varices may be impossible. The hazard of the procedure as performed by his group led to its infrequent use. Palmer²⁴ states that the passage of the esophagoscope over esophageal varices and even injection of them seems to be without significant risk. "Endoscopic examination will be far more fruitful if performed upon re-activation of the bleeding," Palmer.¹⁶

My experience is in agreement with Palmer,²⁴ Friedberg et al¹⁴ and Carter et al²⁵ that esophagoscopy in the presence of esophageal varices is not hazardous if reasonable care is used. It should be thoroughly understood that esophagoscopy in the presence of actively bleeding esophageal varices is not for the occasional endoscopist. Although technique is important, the greatest chance for error is interpretation. Adequate experience can be obtained by a willingness to be available at almost any hour, day, or night to perform the procedure under a great variety of circumstances. I am convinced that during an episode of upper gastrointestinal bleeding is the best time to do esophagoscopy and this should leave no doubt as to the state of the esophagus with respect to varices and the presence or absence of bleeding.

The procedure is easily performed under topical anesthesia with a minimum of sedation, keeping the patient sufficiently active to continue his bleeding during the period of examination. It is my feeling that the procedure, although expertly and successfully performed in most places, has not been pursued vigorously because of a lack of interested and experienced endoscopists.

The problems encountered during esophagoscopy are varied and frequently lead to an erroneous diagnosis primarily through incomplete examination. The patient must be adequately secured to an operating table which cannot be moved about by movements of the patient and yet will allow for rapid and variable positioning. An attempt should be made to obtain the patients co-operation for examination under topical anesthesia. The anticipated degree of co-operation can be evaluated quite easily while placing the topical anesthetic. To accept the average cirrhotic patient's promise of co-operation at face value is to invite a degree of disaster far greater than the indignity of adequate restraint. An adequate topical anesthesia is essential to obtain good co-operation, especially if the endotracheal tube is inserted. In most instances the insertion of the esophagoscope through the cricopharyngeal sphincter determines the ease with which the patient is managed from that point on. Massive hematemesis with the esophagoscope in position can be fatal, and this may be avoided by emptying the stomach when indicated. Observations are most reliably made on deep inspiration,

for the walls of the esophagus are then at rest and the lumen widest. The most difficult area to examine is the cardiac sphincter, and this is best observed when the scope is withdrawn from the stomach. It may be necessary to repeat this portion of the examination several times with the patient in various positions to shift the flow of blood away from the area being examined. Rapid heaving respirations make the examination difficult and in such instances the wall of the esophagus needs to be stabilized on the non-bevel side of the scope allowing the mucosal surface to roll across the tip.

Interpretation of findings are solely the result of experience. Observations made through an esophagoscope held by someone else are not reliable. The scope itself must be used as a diagnostic tool and not merely as a viewing device. Esophagoscopy after the removal of a Sengstaken tube is another matter and can be an examination carrying considerable risk.

Whether the vigorous approach to the problem of upper gastrointestinal hemorrhage will prolong the life of those cirrhotics with actively bleeding esophageal varices has not yet been determined. It is obvious that the patient with a clinical diagnosis of cirrhosis of the liver presenting with a bleeding gastric or duodenal ulcer should not be assumed to have varices and treated accordingly. Perhaps the patient with upper gastrointestinal hemorrhage of non-esophageal origin, presenting with borderline liver function studies may be the one most helped by the vigorous diagnostic approach. He will avoid a false diagnosis of bleeding esophageal varices, established by presumption, and his case will be managed with the benefit of reliable information obtained by esophagoscopy.

SUMMARY

Approximately seventy-five patients with active gastrointestinal hemorrhage were esophagoscoped during the period of active bleeding. Esophagoscopy was performed in the operating room and in most instances under topical anesthesia. The technique of esophagoscopy in the presence of active gastrointestinal hemorrhage was outlined. No complications were observed to arise from the examination. In no instance was it found necessary to abandon the procedure and in all instances the true status of the esophagus was determined.

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Principal Diagnostic And Therapeutic Features Of Head Injuries

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INTRODUCTION

IN caring for patients with severe injuries, radical measures may at times be necessary to maintain life. This is specially true in the care of patients with severe head injury who may harbor intracranial bloodclots incompatible with survival. Our present mode of transportation lends itself to the production of severe head injury as readily in rural as in urban areas. Therefore, it becomes mandatory for all physicians to understand the pathology¹ which exists in patients having sustained a head injury, so that proper therapeutic measures can be undertaken as quickly as possible.

DIAGNOSTIC METHODS

In dealing with diseases of the nervous system it is of prime importance to gain an understanding of the existing pathophysiological conditions. Physiological dysfunction of cell groups may manifest signs and symptoms which, if properly interpreted, lead to localization of the site of pathology. In localization three separate gross areas may be considered: First, signs related to damage or dysfunction of the cerebral cortex manifested by paresis of a specific region of the body, sensory changes in the gnostic sphere, aphasia and visual field changes; second, signs indicating injury to the brain stem in the region of the tentorial notch such as lethargy, pupillary abnormalities and decerebrate states; and third, evidence of posterior fossa nervous system injury demonstrated by lower cranial nerve and cerebellar system abnormalities. The course of the illness will suggest the type of pathology present. Unfortunately, the commonest type of head trauma, the closed head injury, is associated with multiple sites and types of brain damage. It is therefore only after careful consideration of the anamnesis and of all signs and symptoms that adequate management of patients with head injury will be carried out.

Physical Examination

As in all other phases of medicine, the clinical examination—including a detailed history, general physical and neurological examination—far exceeds

any other single item in arriving at a logical diagnostic conclusion. At times the history in itself will reveal sufficient evidence to establish the diagnosis. A story of a head blow followed by progressive development of lethargy and stupor and increasing paresis makes one suspicious immediately of intracranial pathology in the form of a blood clot requiring emergency surgical attention. This latter statement cannot be too strongly stressed. Conversely, a past history of diabetes, epilepsy, psychiatric disorder, etc. may lead one to shy away from early surgical intervention when confronted with a non-responsive patient.

Deterioration in the clinical state is due to intrinsic brain injury regardless of the method of its production. The type of pathology present will determine the end result. Unconsciousness following cerebral concussion will recede usually in minutes to hours—cerebral concussion being a reversible state. However, following more severe brain injury such as contusion and laceration, the extent of prolongation of depression of the state of awareness will depend on the severity of damage to the site producing the signs. Contusion of the brain stem frequently is a fatal lesion.

Immediate loss of consciousness follows direct injury to the brain stem. A gradual loss of awareness with progression from lethargy to stupor and coma developing from hours to days after the head trauma is a pretty definite indication of the development of an intracranial mass causing underlying cerebral edema and secondary brain stem compression. An epidural hematoma, rapidly producing stupor within a period of several hours after the head injury, requires utmost urgency in its removal to prevent secondary brain stem hemorrhage and death. Subdural hematomata developing more slowly usually manifest their signs from days to weeks after the injury. Intracerebral hematomata may act like the epidural hematomata, but also may be slower in the production of outward signs. Sudden loss of consciousness immediately after the injury with continuation of this state for days thereafter usually implies severe brain stem injury with a grave prognosis. However, the initial period of loss of consciousness may be related to minimal cerebral contusion or concussion and the prolonga-

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tion of this state due to brain changes developing from an overlying intracranial blood clot. Only by careful consideration of all details, especially those related to the vital signs, will it be possible to differentiate between severe cerebral contusion alone or minimal cerebral contusion and a developing blood clot as the basis for the clinical state.

In an unresponsive patient the respiratory and circulatory activity, usually collectively referred to as the vital signs, may be the only determining factors indicating the course of the illness. A slow or rapid pulse early in the course of the illness may be of no diagnostic value; however, a rising blood pressure and slowing of the pulse at a later date may indicate the development of an intracranial compressive mass. An increased respiratory rate usually refers to upper brain stem dysfunction, while a gasping type of respiration is associated with lower brain stem injury. The alteration in respiration from one state to another may indicate changing intracranial conditions, such as the development of a blood clot superimposed on an already contused brain.

If one encounters a patient having sustained a bodily injury showing the usual signs of surgical shock, a search should be made for evidence of severe injury in regions other than the central nervous system. Excessive blood loss from a skin laceration may produce this condition; however, a careful examination of the chest and abdomen should be made to determine whether a ruptured viscus is present. Pelvic and extremity fractures may be the provoking factor. All too often, unfortunately, the cause of the shock is assigned to brain injury and death follows a torn thoracic viscus or ruptured spleen. It cannot be too strongly stressed that shock is related almost always to body injury outside the nervous system.

Examination of the head and spine may reveal deformities indicating underlying pathology. A swollen scalp over a skull fracture may be a clue to the diagnosis of a torn middle meningeal artery which is producing an epidural hematoma. Bilateral periorbital ecchymoses suggest the presence of a basilar frontal skull fracture. Serosanguinous fluid in the nasal or aural passages also suggest a basilar skull fracture. A contusion of the frontal scalp in an individual who has fallen down a flight of stairs necessitates the ruling out of a fractured cervical spine.

Anciliary Aids

Diagnostic procedures beyond that of the history and physical examination assume importance at varying stages in the course of the head injury. The spinal tap as a diagnostic aid in management of head trauma is of relatively little value early in the course of the illness. A spinal tap shortly after the

head injury is of value primarily in legal considerations or in the determination of disposition of patients on a busy hospital service. A patient relatively free of complaints and with a clear spinal fluid may be allowed to leave the hospital the following day, while a patient with a bloody spinal fluid would require further hospital observation. Many of the important diagnostic signs believed to be obtained from a spinal tap are in truth unreliable. Increased spinal fluid pressure suggesting the presence of an intracranial mass may be due to blood in the subarachnoid space itself. Increased intracranial pressure due to an intracranial mass may at times not be recorded as such at the lumbar spinal needle due to a jamming of the cerebellum into the foramen magnum. The presence or absence of blood in the spinal fluid has no bearing on the presence of an intracranial blood clot. Intracerebral blood clots, as well as subdural and extradural blood collections are found in spite of a clear spinal fluid secondary to an associated cerebral contusion. If a blow to the head was sufficient to fracture the skull and/or lacerate a dural vessel, then it also could lacerate the brain. It is well known that shortly after a severe head injury with extensive cerebral contusion, clear spinal fluid may be obtained on spinal puncture and that only a number of hours later on repeated spinal puncture will bloody fluid be obtained. Several weeks after the time of head trauma, however, a spinal puncture may be of value in the diagnosis of a complicating meningitis.

One of the more important and frequently employed diagnostic aids is the roentgenogram. Simple skull roentgenograms afford no help in the determination of soft tissue damage. Yet many important deductions can be made from a simple set of x-ray pictures of the skull. Shift of a calcified pineal gland may be due to an intracranial blood clot collection. An air pocket within the frontal lobe, referred to as an aerocoele, follows a compound skull fracture with laceration of the meninges. A fracture crossing a large blood channel of the skull is an important diagnostic aid in determining the presence of an intracranial epidural blood clot.

Roentgenography becomes more valuable when contrast media are instilled into the intracranial spaces or blood vessels. Aerographic roentgenologic study of the brain is a very helpful adjunct to the diagnosis of an intracranial blood clot collection and at times is the only certain method of verifying the presence of an intracranial lesion requiring surgical intervention. Encephalography by means of the fractional replacement of cerebrospinal fluid with air through a needle introduced into the lumbar thecal sac and with the patient in a sitting

position, and ventriculography by the fractional replacement of cerebral ventricular fluid with air through a needle introduced into a lateral ventricle through burr holes made in the skull are the two methods used to visualize displacement of the ventricles of the brain. Encephalography is generally a simpler procedure but possibly less safe in the presence of an intracranial mass. The burr holes made for ventriculography can, if the intracranial dynamics become too severely altered, be used for removal of the air. Furthermore, a subdural collection may be inadvertently encountered and if fluid in character be removed through the burr holes. Because of the safety factor obtained with the use of the burr holes, all severe head injuries and patients with evidence of increased intracranial pressure are necessarily subjected to ventriculography. Encephalography is employed in patients who are alert and with less brain damage. Objections have been raised concerning the advisability of using either air encephalography or ventriculography during the first few days following craniocerebral trauma. We are fully aware of the attendant dangers of a disturbance of the intracranial physiology but by and large those individuals who will be unable to tolerate the instillation of air intraventricularly will probably not recover under any circumstances. Unfortunately, intensive conservative measures and wishful thinking are all too frequently resorted to at a time when precise knowledge regarding the need of surgical measures should be obtained. Operative intervention should not be held in reserve as a terminal gesture. Just so long as surgeons and neurologists persist in the opinion that the diagnosis of intracranial clots of traumatic origin can be made with reasonable certainty on clinical findings alone, so long will instances of large epidural, subdural, and intracranial hematomas be disclosed on the autopsy slab instead of on the operating table.

Within the last 20 years the use of cerebral angiography has assumed a position of prime importance as a diagnostic aid in neurosurgery. Refinement in technique and the use of less irritating solutions in recent years places this procedure ahead of the use of air as a diagnostic measure in dealing with head injury problems. Complications do follow angiography at times, but mostly the procedure is less disturbing to the patient than that of encephalography or ventriculography. Through a needle inserted percutaneously into the internal carotid artery, six to eight cubic centimeters of hypaque are rapidly injected. Using a rapid cassette changer, arterial, capillary and venous phases of the cerebral vascular system can be outlined on the roentgenogram. Displacement of the anatomical position of the blood vessels suggests the presence

of an intracranial blood clot. A midline or posteriorly lying blood collection may be missed by this procedure and may require the use of ventriculography as a supplementary procedure.

Another diagnostic aid, which at times may be of considerable help, is the electroencephalogram. In itself it may be rather nonspecific, but as an aid in the overall study of a patient, it can be very worthwhile. The severity and location of the pathology determines the type of electroencephalogram pattern obtained rather than the kind of pathology present.² Focal cerebral cortex damage will produce a focal abnormality on the EEG, while a brain stem injury may produce bilateral brain wave changes. The EEG is helpful in diagnosing chronically placed surface lesions such as a subdural collection. Over the site of a subdural hematoma one frequently finds a low voltage slow wave pattern which, although not specific for a subdural hematoma, is highly suggestive of the presence of such a lesion if associated with an adequate history of head trauma. Its main value in head trauma is in its lack of disturbance to a critically ill patient and as a follow up in the management of a head injury patient. If it is to be employed as a measure of brain injury, multiple records must be obtained demonstrating a lessening or increase of abnormal waves. A single post-traumatic record without a pre-trauma tracing is of no value in determination of the severity of brain damage.

Various isotopes have been used to diagnose and localize intracranial lesions by the isotope-encephalometric technique. At stated intervals following intravenous administration of a radioactive material, the head is monitored with a Geiger-Muller counter. Because all traumatized tissue, whether it be due to brain edema, abscess, subdural collection, etc., responds similarly to the uptake of the radioactive material, the test loses its value for diagnosis in head injury problems. This test probably will have more value in the diagnosis of intracranial neoplasm.

THERAPEUTIC PROCEDURES

Treatment of patients with severe brain injury, in general, falls into two main categories, vigorous conservative and operative therapy. Vigorous conservative therapy is necessary in all types of head trauma. Establishment of an adequate airway, reduction of elevated body temperature, and many other therapeutic considerations require untiring efforts in the physician's battle against the malignant changes that follow a severe brain injury.

Shock is a well known concomitant of severe bodily injury. However, this is a rare occurrence in intracranial damage unattended by other severe injury or blood loss. Occasionally one may encounter cool and clammy skin of the extremities following

severe central nervous system injury but rarely an irreversible failure of the circulatory system with a low blood pressure and feeble pulse. More often than not, the blood pressure may be a trifle elevated and the pulse slow. An excellent rule to follow is that when surgical shock is encountered in a person with a head injury, look for some other site of injury such as a fracture of the pelvis or long bones, ruptured abdominal or chest viscus, or severe loss of blood. There should be as little delay as possible in overcoming the causative factor of the shock state, if it does exist.

Of paramount importance in the treatment of a patient with a severe head injury is the establishment of an adequate airway. Positioning of the patient on the side will prevent aspiration following emesis or accumulation of excessive secretions in the pharynx. Constant suctioning, using a rubber catheter passed through the naso-pharynx into the trachea, should be employed until clear and free breathing develops. Accumulation of profuse thick secretions in the tracheo-bronchial tree, if allowed to go unattended, will soon produce a severe hypoxic state superimposed upon an already severely injured nervous tissue. It is doubtful whether atropine aids to any degree in the diminution of these secretions. Oxygen applied through nasal catheters passed into the naso-pharynx is of doubtful value, but at least causes no harm and may be of some help. Oxygen tents are of little value in oxygen administration but may aid in reduction of an elevated temperature. Tracheotomy at times is necessary to insure an adequate airway. The judicious use of sedatives in controlling the complaints and restive states of patients with severe head injuries is often necessary. Much of the restiveness can be controlled by skillful nursing; however, at times sedative drugs are required. Morphine, because of its severe depressant action on the respiratory mechanism, has been more or less outlawed in its use in a patient with a head injury. The sedatives producing the least central nervous system depression such as chloral hydrate, bromides, and paraldehyde are the drugs of choice. At times the barbiturates are necessary. To relieve restiveness and pain, the aforementioned drugs together with aspirin or possibly a small dose of codeine may be employed. Individuals with only mild or moderate craniocerebral injuries, but with painful other bodily injuries producing a state of shock, may advantageously be given morphine. Sedatives are more efficacious and probably more safely used when rotated from one drug to another.

The treatment of the majority of patients with severe brain damage, exclusive of those with depressed fractures of the skull, epidural and subdural hematomata, and large intracerebral clots remains

highly empiric. The gross pathologic features observable at autopsy in fatal cases of head injury often include surface contusions, deep cerebral lacerations, diffuse cerebral petechial hemorrhages, and subpial and subarachnoid hemorrhages. Certainly less obvious, but nonetheless real, factors of a pathophysiologic nature resulting from the trauma and loosely spoken of as fluid imbalance, intramolecular derangements, circulatory alterations and vegetative dysfunction almost invariably accompany the gross anatomic findings. Certain misdirected application to clinical material of findings derived from animal experiments has led to the notion of "compression" as an explanation for the constitutional, neurologic, and psychologic alterations observed in patients with brain trauma. In the animal, the alterations in blood pressure, pulse, respiratory rate, and intracranial tension were produced by pressure applied to the external surface of an uninjured brain, whereas in the human, the physiological alterations may be secondary to direct injury to cell groups, as well as an overlying blood clot, and frequently with multiple sites of damage. Thus it becomes evident that the concept of "compression" as an explanation of the altered physiologic state of the traumatized patient may be applied in relatively few instances, especially in the interval shortly after the injury. Browder and Meyers³ found that only slight changes were imposed on the systemic blood pressure, pulse rate, respiratory rate and state of consciousness until the cerebrospinal fluid pressure was raised to a level of over 1,400 mm. H₂O. Fremont-Smith and Merritt⁴ in a study of 1,606 cases found that the levels of the diastolic and systolic blood pressure were uninfluenced in the face of intracranial pressure up to 800 mm. of water and that the cerebrospinal fluid pressure was uninfluenced in the face of increased vascular tension by itself. This does not mean to imply that the reduction of even a mild increase in the measurable intracranial tension may not in certain instances influence the systemic blood pressure and the pulse rate. The fact remains that certain less obvious but nonetheless real factors consequent on craniocerebral trauma are the prime determinants of the objective clinical manifestations in any given case. Employing these considerations, one wonders what the value of the spinal tap in the treatment of head injuries may be. Ill effects do follow removal of spinal fluid as well as, at times, improvement. All things considered, the spinal tap appears of doubtful value and used only after due consideration and with utmost caution. The spinal fluid must be removed very slowly and probably to the point of lowering the pressure to about one half of its original level.

The use of a dehydrating agent likewise is of questionable value. There is no doubt but that in-

tracranial tension can be frequently lowered by the administration of various dehydrating agents such as 100 cc. of 50 per cent dextrose, $7\frac{1}{2}$ gr. of caffeine sodium benzoate, or the more recently employed urea, but the prolonged effect may be deleterious. As reported by Browder and Meyers⁵ in patients with brain trauma the hypertonic solutions usually effected a physiological response on the cerebrospinal fluid pressure that could not be predicted. At times a secondary rise in intracranial pressure occurred which was higher than the original level.

Disturbance in temperature regulation is a well recognized manifestation of severe craniocerebral damage and may possibly be related to hypothalamic injury. The most reliable temperature recording is that taken by rectum; however, at times rectal irrigations using cold water makes it most feasible to use the axilla. Allowing for the difference in axillary and rectal temperature, a fairly reliable temperature course can be followed. A rectal temperature of 102° may be used arbitrarily for the indication of the institution of antithermic measures. These measures are: fanning of the skin after rubbing with warm wet cloths until an erythematous blush has resulted; sponging the skin with cold cloths; instilling cold water into the rectum; or placing the patient in an icepack and administration of aspirin. The temperature should be recorded frequently during the procedure of antithermic measures. In some instances it becomes advisable to continue the temperature reducing measures for many hours or until the tendency toward hyperpyrexia has abated. The reduction of an elevated temperature is exceedingly important in patients with cerebral injury. A rise in metabolic rate of seven per cent occurs with each degree rise in temperature. Rapid irreversible damage to the central nervous system may follow a markedly elevated temperature in a patient who is hypoxic.

Mechanical restraints poorly applied may produce serious harm such as respiratory restriction, nerve palsies, etc. A crib type of bed is a necessity. When applying restraints in the form of camisoles, twisted sheets, cuffs and other devices which immediately contact the body, particular care should be taken that no undue traction is exerted against the axilla lest the nerve trunks coursing from the brachial plexus be damaged. Many times applica-

tion of upper extremity plaster casts prevents patients from removing nasal tubes and indwelling catheters and relieves the necessity of more drastic restraining procedures.

The maintenance of adequate nutrition and water balance is best obtained by the use of a rubber tube passed through the naso-pharynx into the stomach. Medications such as aspirin for elevated temperature reduction and magnesium sulfate as a dehydrating agent can be given through this tube as well as materials for fluid balance and nutrition requirements. In the average adult with the temperature near normal and renal function good, about 3,000 cubic centimeters of fluid should be administered daily. The use of intravenous fluids must be used cautiously in patients with severe cerebral edema. The diet should contain 3,000 calories and 80 to 100 gm. of protein. Care should be taken to maintain a nitrogen balance. A formula that we have found highly satisfactory is that of whole milk, dried skim milk, and a flavoring. Two liters of this formula contains 3,400 calories and adequate electrolyte content. To this may be added vitamin therapy.

SUMMARY

In summary it may be stated that in the management of patients having sustained craniocerebral trauma, careful consideration of the course of the illness, together with the demonstrable signs and symptoms, will suggest the type of pathology present and the manner of therapy to be employed.

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The President Speaks

The impression that in his address to the recent American Medical Association meeting President Eisenhower advised doctors to charge reasonable fees or face possible governmental control of medicine, has *not* been confirmed by any Connecticut physicians who attended that meeting and listened to the President speak.

According to these men, the President warned against inflation as a threat to all personal freedom throughout the nation and urged members of the medical profession to assume civic leadership in attempting to curb the inflationary spiral in their own localities, not only in regard to the costs of medical care but to all other aspects of the economic life of the community as well. In commending doctors for their efforts in helping to meet the needs of a rapidly expanding old-age population, he called on them to show the nation that "our economy, like our bodies, must be vigorous," and that in addition to advising people how to preserve health, they should promote the philosophy that "the future of our republic and the free world depends upon our ability to maintain fiscal soundness in government, a robust economy, and a stable dollar."

This interpretation of the President's message seems much more in keeping with known facts, since practically every recent survey has clearly shown that while medical care costs have gone up substantially, doctors' charges are rather non-inflationary, having risen only a very modest 70 to 80 per cent in the past twenty years as compared with increases of 300 per cent and more in the costs of many other goods and services. It is also a fact that as a result of longer periods of professional training and increased knowledge of newer methods of treatment, physicians are providing a better quality of medical care to their patients today than ever before.

Here in Connecticut, the medical profession is not only devoting attention to scientific advances, but is also concerning itself with the social and economic aspects of medical service referred to by the President. The Connecticut State Medical Society has recently pledged its continued support to the development of effective health insurance and prepayment programs for all individuals, including the group over 65 years of age, and is now undertaking several major projects in this field which should prove to be of great value in making it possible to provide the public with sound and comprehensive health coverage while retaining complete freedom of choice of physician by the patient.

W.R.R.

Ionizing Radiation And Coronary Artery Disease*

Recent publicity²⁰ given to the possibility of using radiation therapy in coronary artery disease has stimulated many questions and among radiologists not a little apprehension. To the myriad of treatments considered for coronary artery disease radiation therapy has been added. Drs. E. Senderoff, D. J. Kavee, R. J. R. Johnson, and I. D. Baronofsky of New York's Mt. Sinai Hospital,²¹ delivered doses of 1300r or 2000r to the hearts of dogs over periods of 14 to 18 days. When the anterior descending branches of the left coronary arteries of these dogs were ligated four to six days following completion of the radiation therapy, survival rates were significantly higher, 44-83 per cent, than in control animals, 0-33 per cent. Apparently further experiments²⁰ have supported the original findings, and preparations are being made to try this sort of treatment experimentally in man. The general clinical use of irradiation in coronary artery disease, however, is not suggested. The authors are to be commended for their original effort, and it is hoped that their further experimental work will eventually find the proper place of cardiac radiotherapy in human coronary artery disease.

Cardiac radiation therapy in coronary artery disease is not justified at the present time as no substantial evidence in man supports its value. Direct application of experimental results in the dog to man has repeatedly been found hazardous.^{5, 8, 14} The experimental work in dogs mentioned above has not yet been confirmed by other workers. Alternate interpretations of the data may be possible. The apparent salutary effect of irradiation in the experiments described may be a non-specific response or may represent a transitory beneficial effect of a treatment which in the long term will be harmful.

The classic work of Schlesinger, Blumgart and others^{3, 4, 19, 27} has shown that intercoronary arterial anastomoses of significant size are present in only about 10-20 per cent of normal human hearts. In contrast the heart of nearly all patients with gross coronary artery occlusive disease at necropsy show such anastomoses. That many of the latter individuals had no pathological or clinical evidence of myocardial damage may be accounted for by these numerous large intercoronary arterial anastomoses. Myocardial ischemia and related differential intervascular pressures are strong stimuli to the development of such collateral circulation.^{4, 11, 14, 18, 26, 27} According to Beck² increased intercoronary arterial

collateral circulation is the common factor by which a variety of experimental surgical procedures, originally designed to promote extra-coronary to coronary collateral circulation, succeed in preventing death following acute coronary occlusion. Increased intercoronary circulation per se seems to be accepted as desirable in helping to allay the untoward effects of acute local coronary artery occlusion or insufficiency.

Related to these considerations is the author's²¹ premise for the consideration of radiation therapy in coronary artery disease, that "successive small doses of radiation will produce dilatation of existing myocardial capillaries and precapillary arterioles, which in the presence of myocardial ischemia and the natural compensatory ability of cardiac tissue to develop collaterals will persist and increase in number." Although at times preceded by an initial vasoconstrictive effect⁷ ionizing radiation in the doses mentioned can produce in the skin and other organs a temporary hyperemia probably consequent to the liberation of vasodilatory material by damaged cells.^{6, 7, 12, 16} That such early radiation induced erythema will produce significant long term augmentation of intercoronary collateral circulation even in anoxic myocardium is yet to be proved. Despite much clinical and experimental work the mechanisms by which ionizing radiations damage tissues are not fully understood. Certainly the major factor is direct damage to individual cells.^{1, 9, 12, 17} A wealth of histologic evidence, however, indicates that prominent among the late effects of ionizing radiation are atrophy and damage to blood vessels including endothelial proliferation and thrombosis with apparent circulatory impairment.^{22, 23, 24} Many experienced workers have felt that the vascular damage was often primarily responsible for the clinically observed late consequences of irradiation.

From the point of view of the radiologist that local radiation therapy should have an ultimately beneficial effect on the coronary circulation and health of the myocardium would be somewhat surprising. Information from many sources indicates that ionizing radiation in general has a direct and partially cumulative deleterious effect on cells. Radiotherapy as a treatment for cancer is based on this premise—that under the circumstances of the treatment the neoplastic cells are damaged relatively more than the normal cells but both types of cell are damaged.¹³ Although the heart is known to be clinically relatively resistant to radiation, evidences of injury can be found.^{10, 15, 25} Also doses of 2000 rads in two weeks to the heart would be expected to damage the adjacent lung tissue of some individuals.

Research into the causes of and remedies for coronary artery disease is important and obviously should be pursued with vigor. Premature clinical

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application of ionizing radiations in the treatment of coronary artery disease based only upon preliminary experimental work in dogs is to be deplored—especially when much evidence indicates that the long term effects are likely to be harmful.

K. E.

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The Significance Of Research

"Curiosity is one of the permanent and certain Characteristics of a vigorous intellect."

Samuel Johnson

While, according to the old American proverb, "too much curiosity killed the cat," no physician can be really successful without an ample supply of "the questing spirit". Dr. Douglas Guthrie, an expert laryngologist and lecturer on the History of Medicine in the Edinburgh Medical School, recently discussed the significance of research before the Historical Section of the Royal Academy of Medicine in Ireland. His able paper was entitled "The Way of the Investigator".*

Dr. Guthrie refers to the three-paneled stained glass window in the Mayo Foundation House in Rochester, Minnesota, which illustrates the main fields of Medicine: Education, Practice and Research. He cautions against too narrow a conception of research which, while of major import, is inextricably intermixed with the other two fields. He points out that research is the chief occupation of childhood, and is a characteristic which is tantalizing to many parents who are obliged to answer, or attempt to answer, many questions as to "how" and

* Guthrie, Douglas, *Irish Journal of Medical Science*, March 1956.

"why". He notes that the spirit of investigation is the most valued possession of the medical scientist, far more important than elaborate laboratory equipment. He realizes, of course, that some forms of curiosity, that of the gossips and scandalmongers, for example, are undesirable and he agrees with Cardinal Newman that many eminent researchers are poor teachers, but that the combination of research ability and outstanding teaching capacity in the same individual, while rare occurs at times. He points out certain conditions which are essential in successful research: a preliminary survey of the literature to be sure that the problem under investigation has not already been solved; a hypothesis covering the purpose of the research; a plan of procedure; an unbiased observation of discovered facts which, if the experiments fail to confirm the hypothesis or if unexpected facts emerge, will lead the scientist to revise the original scheme; finally, careful cogitation on the observed facts. He notes that the discovery of an error in accepted knowledge may be as valuable as a new discovery, and he approves the modern technique of team researches which may be stimulating and valuable. He notes that the discovery of a principle is much more important than one of a fact. He observes that in the past valuable discoveries were sometimes disregarded because medical students and practitioners were not mentally prepared for them. He thinks that nowadays with rapid methods of transportation and the diffusion of knowledge this is less likely to occur. The article is a classic and should be "read, marked, learned and inwardly digested" by both medical students and physicians.

G.B.

Meeting Disaster With Blood

Following Red Cross tradition to be prepared to meet disaster situations the Connecticut Blood Center in Hartford has on hand at all times, 48 fresh O-Negative type bloods. These bloods, which are rotated daily to keep them as fresh as possible, are packed for instant shipment. In addition, there is also serum albumin available at all times for disaster purposes. The Connecticut system of inter-hospital blood exchange creates an additional emergency reserve of approximately 2,500 typed bloods immediately available on the shelves of the blood bank in Connecticut hospitals. Also to these Connecticut blood reserves, by virtue of being a part of the American National Red Cross, other Red Cross Centers throughout the United States could be called upon to lend aid. Although Connecticut has been fortunate enough not to have to request disaster aid, blood has been shipped from the Center to other areas in distress.

Letters To The Editor

New Haven, Connecticut
June 20, 1959

Dear Doctor Nahum:

I have read your editorial entitled, "Basic Science and Practical Medicine" with great interest. I think it is wise to point out the hazards of potassium and particularly, to indicate how little really is known about its manner of function.

Locke's early work with calcium-free blood is certainly a classic. At Doctor Mauro's suggestion, we did a couple of experiments this year using blood that had been freed of the ionized calcium. This is a most effective method of producing asystole and as you indicate, may become the accepted technique.

As you probably know, at present cardiac surgeons are not using any agents to induce asystole. Instead the aorta is cross clamped and hypoxic asystole results. Indeed, this takes place so rapidly that it may be one of the mechanisms functioning when potassium is used. With this technique, damage to the myocardial fiber is much less than with either potassium or acetylcholine and recovery seems to be as prompt. In cases of aortic stenosis, asystole is used for periods up to ten minutes and then coronary perfusion is carried out for three to five minutes after which surgery is again resumed with hypoxic asystole.

Of interest too, is the technique now being used by Lillehei in which selective hypothermia of the myocardium is achieved by coronary perfusion with cooled blood while the main extracorporeal circuit is carrying normothermic blood. This may be of even greater value by reducing the oxygen demand of the myocardium during the period of asystole. We have not personally used this technique.

Again let me tell you how much I appreciated this excellent editorial. The more basic science can be brought to the attention of clinicians I am sure, the better medicine will be.

MAX G. CARTER, M.D.

PR for MDs

Putting yourself in the patient's shoes is the essence of good physician-patient relations.

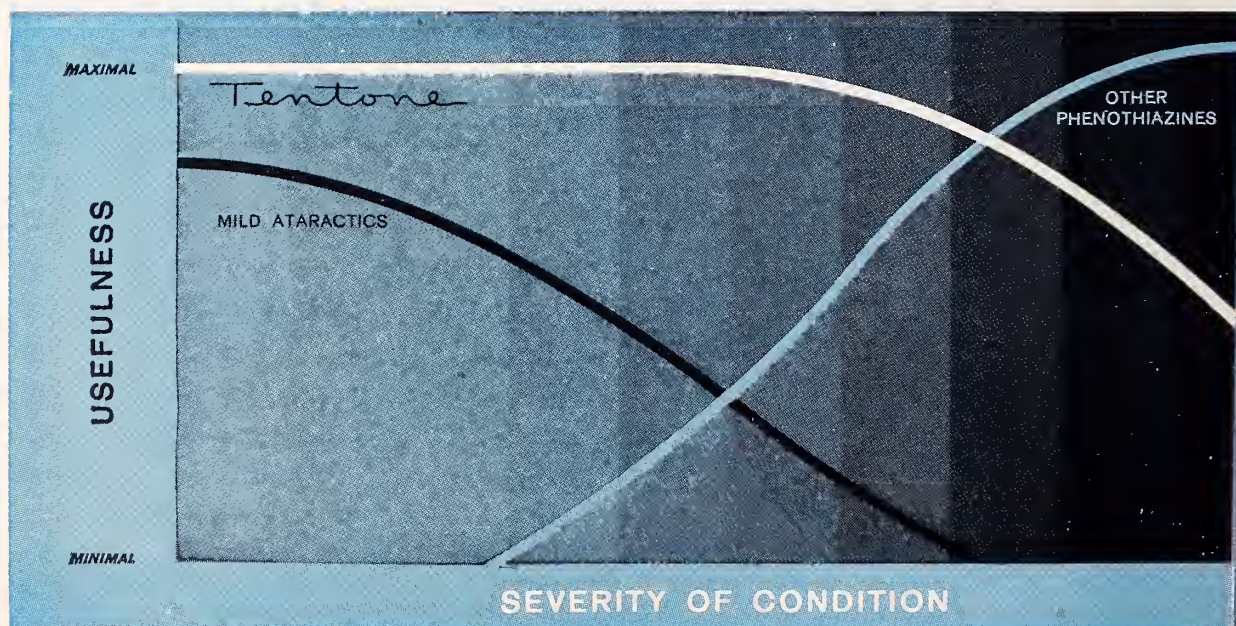
There are occasions when an MD changes his office hours, closes the office to attend a medical meeting or for some reason is unable to keep on schedule with appointments. Let your patients know—by telephone, by letter or in advance conversations.

When an emergency arises and the appointment schedule is upset, head off those on the schedule by telephone if possible, give those who do show up an opportunity to shop for an hour or so, have coffee, or make a new appointment.

Your patients will appreciate your consideration. Their time is valuable, too.

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THE PRESIDENT'S PAGE

WITH the advances in the science and art of medicine, there is a proportionate increase in life expectancy. Commensurate with this, we find many persons beyond the arbitrarily chosen age of 65 whose physical and mental capabilities are much better preserved than in those of a generation or two ago. It is for reasons such as these that retirement should not be based on chronological age alone. This improved and increased life span for the average person must be related to the social and economic considerations of our times.

The theory behind arbitrary retirement at any given age is fallacious. The A.M.A.'s Committee on Aging has asked labor and industry to re-evaluate their support of mandatory retirement based on chronological age. In a somewhat related field the politicians have picked upon the chronological age of 65 as a time at which benefits under the proposed Forand Bill are to be made available along with Social Security. At the time of this writing this bill is yet to be heard before the powerful House Ways and Means Committee. By the time this page goes to press, it is hoped that this matter will have been dealt with in a manner satisfactory to every physician who abhors the *political* approach to a *health* problem. Otherwise, certain politicians will have so forced the door that their nationalized and bureaucratic program will continue to enter unimpeded.

In several public addresses, Dr. Gunderson, immediate past president of the A.M.A., frequently referred to the fact that very few physicians retire at age 65. Recently a long list of names of nationally famous business executives and professional men in their eighties and nineties was published in the A.M.A. News. The public is aware of these and other famous men who are busy in such advanced age partly because of their prestige, fame or financial standing. "There are hundreds of thousands of their less famous fellow Americans to whom such opportunities are denied by outmoded public concepts on aging. Our infatuation with retirement at age 65 is partly to blame," the article reports.

Many persons in this age group are self-supporting and self-respecting individuals. It is a grave socio-economic error to lead these people into the belief that they are no longer useful and functioning units of our society by forcing upon them this compulsory chronological retirement age. Such action has spelled psychological and physical doom to many an individual in whom the laws of biology would have permitted a productive life during a physiological age a decade or two beyond the age of 65.

An interesting study on the use of health services by the aged was recently presented by the Health Information Foundation. Economic factors seem to be a relatively minor element on the part of persons over age 65 in their reluctance to see a physician, even though most people in this category are retired and have incomes which are low compared with those of the working population. Only three out of every 100 older people said they had delayed seeing a physician because of cost. An even more striking point brought out by this study was that the source of payment of doctor bills of persons in this group was out of their own resources in most instances. Only a very small number listed their payments to doctors from other sources such as a child, relative or indeterminate.

I hope that I may some day report briefly on this page concerning a similar study relating to the source of payments for hospitalization of the senior citizen. The recent intensive enrollment programs entered into by all voluntary hospital-surgical care programs to include persons over 65 will result in an increasing amount of such costs being absorbed by voluntary medical-surgical-hospital care plans which are cooperating in an expanding effort with organized medicine in its concern for these older persons.

In the interest of better care for our patients and in an attempt to forever abolish the spectre of compulsory nationalized health care, may the voluntary way—the American way—succeed.

FROM THE SECRETARY'S OFFICE

WILLIAM R. RICHARDS, M.D., *Executive Secretary*

James G. Burch
Director of Public Relations

160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

Josephine P. Lindquist
Assistant to Executive Secretary

Joint Mediation Panel

The special attention of all members of the Society is called to the action of the Council on June 17, 1959, with respect to the setting up of a mechanism whereby disputes between members of the Society and the governing bodies of member hospitals of the Connecticut Hospital Association may be impartially considered by a Joint Connecticut State Medical Society-Connecticut Hospital Association panel.

The Secretary suggests that this part of the minutes be read carefully by each member, both as to the recommendations proposed by the joint committee and the motion adopted by the Council.

COUNCIL MEETING

Wednesday, June 17, 1959 — 2:30 P.M.

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 2:30 P.M. on Wednesday, June 17, 1959. Present in addition to the Chairman were Doctors Weise, Gallivan, Goldberg, Richards, O'Connor, Carter, Cullen, Scully, Cornwell, Kennedy, Buckley, Blodinger, Murray, Gilman, Eddy, Pollock, Grendon, Gardner, Rentsch, Phillips and Chartier. Absent were Doctors Davis, Gens, Schiavetti and Metcalf.

RESIGNATIONS

(A) It was VOTED to accept the resignation of Lewis P. James, Hartford, as Chairman of the Committee to Study Maternal Mortality and Morbidity. By majority VOTE, Carl E. Johnson, New Haven, is to be requested to fill this post for the current year.

(B) It was VOTED to accept the resignation of Edward J. Ottenheimer of Willimantic, as a member of the Cancer Coordinating Committee and as a member of the Executive Committee of the Cancer Coordinating Committee. It was determined from the by-laws that William A. Whalen, Willimantic, who was suggested by the committee chairman to replace Dr. Ottenheimer as a member, cannot be appointed at this time since he is not yet a full member of the Windham County Medical Association. It was VOTED to invite Dr. Whalen to attend meetings of the Cancer Coordinating Committee as an observer and a participant in discussions of the committee, but not as a regular member.

It was further VOTED to appoint William Stahl, Jr., Danbury, as a replacement for Dr. Ottenheimer on the Executive Committee. Dr. Stahl is presently a member of the Cancer Coordinating Committee.

(C) It was VOTED to accept, with thanks, the resignations of Ira V. Hiscock, New Haven, as an Associate Member of the Committee on State Blood Bank and as a Consultant to the Committee on Public Health.

REPORT OF THE CSMS-CHA JOINT CONFERENCE COMMITTEE

Israel E. Blodinger, New Haven, Chairman, reported for the committee. The recommendations of the committee and a motion based on these recommendations follows:

RECOMMENDATION

"Recognizing that the granting of privileges to physicians to work in a hospital is of vital importance to the doctor, the hospital and the community and must be safeguarded at all times, the Connecticut State Medical Society and the Connecticut Hospital Association recommend that each hospital follow the fundamental principles outlined in the "Model Medical Staff By-laws, Rules and Regulations" of the Joint Commission on Accreditation of Hospitals.

Particular attention is called to the following principles:

(A) A definite procedure, including application, review of credentials, right of appeal, and final action on appointment, promotion, demotion or dismissal must be followed.

(B) A representative Credentials and Qualifications Committee should be formed as a standing committee.

(C) A representative joint conference committee from the Medical Staff and Board of Trustees should be formed.

(D) In any case where either the "Credentials and Qualifications Committee," duly charged with this responsibility, or the executive committee of the Medical Staff does not recommend re-appointment, or where reduction of privileges is recommended, the administrator shall notify the physician concerned and he shall be given an opportunity of appearing before the credentials committee and joint conference committee in joint session.

In such cases where the above or similar procedures have been carried out and the individual physician and the governing body of the hospital are in disagreement and either party requests consultation, the Connecticut State Medical Society and the Connecticut Hospital Association will furnish a panel of three members from each group to assist, by reviewing the facts and by making recommendations."

MOTION

"It is Moved: That, upon request, the Connecticut State Medical Society join with the Connecticut Hospital Association in the formation of a panel, the purpose of which shall be to assist in resolving disputes arising between members of these two organizations wherein all established procedures have been carried out without agreement, and

It is further Moved: That the three members appointed by the Connecticut State Medical Society to serve on this joint CSMS-CHA panel shall be chosen by the President of the Society from a group of fourteen members of the Society which shall be appointed annually by the Council, and

It is further Moved: That the group of fourteen members of the Society, heretofore described, shall be appointed as follows: One member each from Windham, Tolland, Litchfield, Middlesex and New London Counties, and three members each from New Haven, Fairfield and Hartford Counties.

It is further Moved: That the Committee be discharged."

It was VOTED to accept the recommendations of the committee and to adopt the motion. It was further VOTED to send copies of these two documents to the Committee on Hospitals for information.

Dr. Blodinger reported that the Connecticut Hospital Association members of the committee will make identical recommendations to the governing body of the CHA, ask for acceptance, and request that a method of appointment of members to the panel be set up by the Connecticut Hospital Association.

SEVENTH NATIONAL CONFERENCE ON PHYSICIANS AND SCHOOLS

A request from William A. Wilson, Chairman of the Committee on Public Health, that Miss Ruth E. Byler, Ed.D., a member of the Advisory Committee on School Health, be designated as the Society's representative to this conference was disapproved. It was VOTED that the Chairman of the Council, the President of the Society and the Executive Secretary meet with the Chairman of the Committee on Public Health for the purpose of designating a representative of the Society to this

conference. It was further VOTED that in designating this representative, it is the desire of the Council that such representative be a doctor of medicine, and a member of the Society.

WELFARE PATIENTS' PRESCRIPTION BLANKS

Reports were read or given verbally by the Councilors from the eight county medical associations of the actions taken by the governing bodies of the associations with respect to the recommendations of the Advisory Committee to the Commissioners of Welfare and of Finance and Control, considered at the Council meeting of May 14, 1959. Since six of the eight county associations indicated approval of the recommendations, the Council VOTED to approve same and to notify the Chairman of the committee to this effect. It was further VOTED to request the Advisory Committee to give additional consideration to the unfavorable actions and comments of the governing bodies of Windham and Tolland County Associations.

APPROPRIATION TO ADVISORY COMMITTEE TO COMMISSIONERS OF WELFARE AND OF FINANCE AND CONTROL

It was VOTED to appropriate an additional sum of \$150 to the operating budget of the Advisory Committee to the Commissioners of Welfare and of Finance and Control.

GIFT TO THE SOCIETY

A gift to the Society of \$25 had been received from Frederick W. McFarland, Stamford, to be used "in any way you deem advisable." It was VOTED to acknowledge Dr. McFarland's gift, accept it with thanks, and assign the amount of the gift to General Funds.

RECOMMENDATIONS OF COMMITTEE ON PUBLIC HEALTH RE POLIOMYELITIS

The Hezekiah Beardsley Pediatric Club and the Connecticut Society of American Board Internists had indicated approval of these recommendations (previously recorded in the Council minutes of April 22, 1959 and published in the June issue of *Connecticut Medicine*). The EENT Section had failed to submit a report as yet. It was pointed out that the Department of Health has already sent out similar directives relative to ENT surgery and poliomyelitis vaccine inoculations. In view of this latter fact, it was VOTED to take no action on these recommendations at this time.

CMS

Israel E. Blodinger, New Haven, reported as a Director of CMS. The only matter of significance he desired to bring to the attention of the Council was the substitute bill for S.B. 942 which had been passed by the General Assembly recently. The

original bill called for the election of a certain number of representatives of organized labor to the CMS Board. Under the substitute bill, the following provision is made: "Such corporation (CMS) shall include in its by-laws provision for the election of at least three of its policy-holders to its board of directors by its members, and failure to include such a provision in such by-laws or to abide by such provision shall be grounds for disapproval by the insurance commissioner of any contract it may enter into during the period of such noncompliance."

A critique of the script of the film: "The Story of CMS" was reviewed, having been distributed to the Council members prior to the meeting. The consensus of opinion was that the critique was generally sound and its conclusions well founded. After some discussion, it was VOTED that the script and its possible revision should be reconsidered in consultation by the liaison sub-committees of the Society and CMS. It was further VOTED that such script, revised or otherwise, be re-submitted for appraisal by the Council at the conclusion of such consultation by the joint sub-committee, and it was further VOTED that copies of the critique be sent to members of the CMS Executive Committee for information.

SUB-COMMITTEE ON OPINION SURVEY

A progress report was submitted by the Executive Secretary (also the Chairman of this sub-committee) who distributed comprehensive working outlines which will be used as a guide by members of the sub-committee at its first orientation meeting to be held on June 24, 1959, and at subsequent meetings, in developing an "Opinion Survey Questionnaire."

Since no funds had previously been appropriated for use by this sub-committee, it was VOTED to appropriate \$250 as an operating budget for this use.

COMMITTEE ON RELATIVE VALUE STUDY

The Secretary also reported for Benjamin D. Thaw, Chairman of the Committee on Relative Value Study. Informational materials on the subject have been distributed to all members of the committee and the first orientation meeting has been scheduled for July 2, 1959. Many members of the committee, as well as other interested members of the Society, have been invited to attend the Second Regional Meeting on Relative Value Studies to be held at Swampscott, Massachusetts on July 18, 1959.

It was VOTED to appropriate the sum of \$400 as an operating budget for this committee.

MEMBERSHIP—DELINQUENCY OF DUES

The Council was asked to recommend a policy which might be followed by the Membership Section of the Secretary's office in cases of return, or reinstatement, of members who had previously been dropped from membership for non-payment of Connecticut State Medical Society dues.

It was VOTED to adopt and follow the policy of the AMA in this matter.

"Members of the AMA who have been dropped from Membership for non-payment of annual dues cannot be reinstated until such indebtedness has been discharged, but such indebtedness shall apply only to the one year of delinquency."

RECOMMENDATIONS OF THE EXECUTIVE SECRETARY

The following recommendations had been submitted to the Council with a request that they be approved:

(1) There have been a number of unfavorable comments directed at the Society's public relations program. These comments and criticisms have had their sources not only in members-at-large, but also in the Public Relations Committee itself. The PR Committee has erroneously assumed that the time and efforts of the PR Section have been greatly utilized by the Executive Secretary during the past year because of his part-time endeavors in that post.

Actually, this assumption was without foundation, since few if any demands on that section were made by the Secretary. The fact of the matter seems to be that, over the years, the PR Section and its personnel have been directed to become more and more involved with committee work which has not been and is not now of a public relations nature in any sense of the words. Veterans Medical Care, AMEF, Health Careers, Rural Health, and other committees have from time to time imposed on the PR office to carry on committee work and to perform many other routine duties associated with those committees which are unrelated to PR functions.

On this account, the primary purpose of the PR Office seems to have become largely secondary, and it must be assumed that this explains why so many members of the Society feel that the amount and quality of public relations have been reduced to a rather feeble minimum.

The Secretary therefore recommends that he be authorized to transfer all non-public relations work out of the PR Section into the general office; and that under the Secretary's supervision, Mr. Burch, his staff, and the PR Committee concentrate on developing a progressive, continuing and forceful public relations program for the members of the Society.

(2) Most members of the office staff do a great

deal of stencil work for committees, for the Council and for the Secretary. If the transfer of work described in (1) were effected, this work-load will obviously increase. The Secretary has observed that the amount of time required to prepare the stencils and proof-read them is usually exceeded by the length of time required to run the stencils off on the mimeograph, assemble the several pages, staple them together and package them up for mailing or other distribution.

Thus, it appears that much of the time of competent secretarial and stenographic personnel is being wasted on relatively unskilled work and, as a consequence, the completion of more important projects is frequently delayed or necessarily accomplished in haste. The efficiency of the staff is materially reduced under this system.

The Secretary therefore recommends that, on an experimental basis, he be authorized to engage the services of a relatively unskilled, additional employee for two hours daily for a total of 10 hours a week, to be paid not less than \$1.00 nor more than \$1.25 per hour, for the purposes of doing all the mimeographing of prepared stencils and of assisting the regular staff in packaging these and other material for mailing or other distribution.

Considering these two recommendations together, it was VOTED to adopt Recommendations 1 and 2, and that the General Manager inform the chairmen of all committees involved as to the primary duty of the Public Relations Officer and that all non-Public Relations Committee work will be transferred to the Secretary's office as indicated in these recommendations.

(3) With respect to certain extra duties being assigned to members of the office staff on a mutually participating (rotating) basis, the Council was asked if it wished to indicate which members of the staff were to be classified as having "executive" status. It was VOTED that the Council does *not* desire to make such designation. It was further VOTED that the General Manager be informed that the Council approves his assignments of all duties to the office staff, including such extra duties as he may assign on a mutually participating basis.

(4) Full discussion was given to the question of whether there was need to retain the automobile presently owned by the Society and used by the staff when engaged on Society business which requires travel or transportation. Operating costs were compared with those which would be incurred by the utilization of a rented vehicle. After considering all aspects of the matter, it was VOTED that the automobile be retained for use in conducting the necessary business of the Society. It was further VOTED that, except when in normal use, the car be kept in the parking lot at the rear of the Society's building.

MEMORANDUM FROM THE COMMITTEE ON PUBLIC RELATIONS

A memorandum was received from the Committee on Public Relations in which matters relating to the Public Relations and legislative programs of the Society were commented upon. It was felt that the observations contained therein merited full consideration and it was therefore VOTED to accept the memorandum as information, to advise the Public Relations Committee that the question of engaging a "lobbyist" for the next legislative session of the General Assembly would be thoroughly investigated in anticipation of that session, and to instruct the Executive Secretary to inform the committee regarding present plans for improving, strengthening and making more effective the Public Relations program in conjunction with the Public Relations Committee.

MINORITY REPORT OF SPECIAL COMMITTEE

A minority report of Samuel Spinner, New Haven, a member of the Committee of Three to Study and Propose Revisions in the Structure and Functions of the Committee on Third Party Payments was received. It was VOTED to accept Dr. Spinner's report and refer it to the Sub-committee to Study and Revise the By-laws. It was further VOTED to refer the Majority Report of the same committee (received April 22, 1959) and held over until after the organizational meeting of the Council on May 14, 1959) to the same sub-committee so that the two reports may be considered together. It was further VOTED to discharge the Committee of Three, its assignment having been completed.

COMMUNICATION FROM MARYLAND MEDICAL AND CHIRURGICAL FACULTY

The House of Delegates of the Maryland Society endorsed the following recommendations of its Committee on Veterans Medical Care at its 1959 annual meeting, as it did in 1957 and again in 1958:

"1. Limit Federal medical care of all veterans to service-connected disabilities.

2. Have veterans with service-connected disabilities cared for by the Armed Forces Hospitals or by local civilian hospitals on a Hometown Care basis. U. S. Public Health Service hospitals might also be used to a limited extent.

3. If and when Number 1 and Number 2 are accomplished, a study be made from the State level as to the disposition of the Veterans Administration hospital facilities. Consideration should be given to turning them over to the States, possibly as hospitals for tuberculosis and neuro-psychiatric patients."

"The House voted to send copies of these recommendations to all state medical societies and to the

AMA, stating "that we are anxious to get concerted action by all State Medical Societies so that we will have some chance of getting a Congressional Hearing before the House Veterans Affairs Committee."

"It is the earnest hope . . . that your Society will take similar action . . . and will also urge the AMA to join in trying to obtain the Congressional Hearing which is considered desirable and is the only means of correcting present abuses in Veterans Medical Care."

The Council was informed that a copy of Dr. Buckhout's excellent report on these matters, adopted by the Connecticut State Medical Society House of Delegates on April 28, 1959, had been sent to the Maryland Society for information.

It was VOTED to accept the Maryland communication for information.

ANNUAL MEETING OF THE SOCIETY (1960)

(A) It was VOTED to request the Hartford County Medical Association to consider inviting the Society to hold its 1960 Annual Meeting in Hartford County.

(B) Report of 1959 Annual Meeting: Attendance:

Physicians	769
Guests	288
Exhibitors	162

Total	1,219

Approximate net income \$2,125.00. Income lower than previous years due to less space for exhibitors and increased cost in school rental.

It was VOTED to accept this report as information.

REMARKS OF AMA DELEGATES RE ANNUAL MEETING OF AMA, ATLANTIC CITY, JUNE 8-12, 1959

Drs. Gallivan, Cullen and Carter each gave a resumé of the business transacted by the House of Delegates and indicated that comprehensive coverage of the meeting would appear in issues of the AMA News.

JOINT CONFERENCE COMMITTEE ON STAPHYLOCOCCAL AND OTHER HOSPITAL-ACQUIRED INFECTIONS

With respect to the establishing of an advisory committee on staphylococcal and other hospital-acquired infections, William R. Wilson, Hartford, Chairman of the Committee on Public Health, makes the following recommendations.

- (1) That the purpose of such a committee will be to promote means and methods of preventing and minimizing the hazards of staphylococcus infections in hospitals and in the community, and to aid in the prevention or limiting of epidemics.
- (2) That the function will be a continuing com-

mittee to coordinate and promote understanding, and encourage appropriate cooperation in meeting the staphylococcus problem in the interested areas, namely, hospitals, private practice, the Connecticut State Department of Health, (epidemiological and legal responsibilities), Public Health Officers, and the community at large.

(3) That the Committee on Public Health feels that the Connecticut State Medical Society should continue to provide leadership in this field of public health medicine, and that the program can best be handled in the frame work and as a responsibility of the Committee on Public Health. We respectfully submit the following motion for your approval:

"The Committee on Public Health recommends to the Council that an Infections Committee for the control of staphylococcus and other hospital acquired infections be established, and that this Committee be an Advisory Committee to the Committee on Public Health of the Connecticut State Medical Society. Such Committee to be composed of members from the Committee on Public Health, members from the Perinatal Committee, members from the Committee on Hospitals, and other qualified members of the Connecticut State Medical Society. Furthermore that such Committee, when appointed, be empowered to consult with the Connecticut State Department of Health, Connecticut Hospital Association, and representatives of the faculty of the Yale School of Medicine."

It was VOTED that the establishment of an Advisory Committee to the Committee on Public Health, as recommended by the chairman, be approved.

COORDINATOR FOR MEDICARE

The Council received with regret the information that Daniel F. Levy, New Haven, had died on June 13, 1959.

Dr. Levy held the posts of Coordinator for Medicare, Chairman of the Joint Conference Committee with the Connecticut Bar Association, and member of Committee on Industrial Health. It was VOTED to place the matter of replacements for Dr. Levy on the agenda of the next meeting.

In view of the need for a physician to carry on the duties of the Coordinator for Medicare, the Chairman of the Council later directed the Executive Secretary to request Frank L. Polito, Torrington, to accept this post, such appointment, if accepted, to be confirmed by the Council at the next meeting.

REQUEST FOR AUTHORIZATION TO PURCHASE EQUIPMENT

The Secretary's office requested authorization to make purchases of equipment in the amount of \$160 (approximate).

It was VOTED to appropriate funds for these purchases from the Russell Fund and from the general funds, if necessary.

RUSSELL FUND

It was VOTED that the sum of \$5,000 recently acquired from maturing of bonds purchased through the Russell Fund, be assigned by the Treasurer of the Society as he deems advisable.

DATE OF NEXT MEETING

It was VOTED that the Chairman and the Executive Secretary call the next meeting when indicated.

WILLIAM R. RICHARDS, M.D.
Executive Secretary
THOMAS M. FEENEY, M.D.
Chairman of the Council

Meetings Held In July

- 2 Committee on Relative Value Studies
- 7 American Medical Education Foundation Committee
- 9 Committee on Public Health
- 23 CMS Liaison Sub-committee
- 28 Sub-committee on Opinion Survey

New Radioactive Test Shows Liver Damage

A new test using radioactive dye to measure the function of the liver was described in the current Journal of the American Medical Association.

The test, which is much simpler than older tests, opens many new possibilities in the study of liver disease and damage, according to Drs. Robert A. Nordyke and William H. Blahd, University of California Medical Center, Los Angeles.

Among the conditions in which the test is used are cirrhosis, hepatitis, alcoholism, and common bile duct obstructions.

Radioactive rose bengal is injected into the blood stream. The speed with which it disappears from the blood indicates the degree of liver damage or disease. The liver plays a role in removing the dye from the blood. Its disappearance is measured by a standard radiation counting device held against the head behind the ear.

The head was chosen as the site of measurement because it contains a rich and stable blood supply which is distant from the large and changing concentrations in the abdomen, the doctors said.

Older tests using rose bengal and other substances necessitated the withdrawal of blood from the veins for checking the color of the blood. The

value of these tests are restricted, the doctors said, to liver disease without jaundice because of difficulty in reading color changes.

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following names of Doctors who would like to practice in Connecticut:

Naci Yildizalp—Age 36—M.D. University of Istanbul 1949—Internship Naval Hospital, Istanbul, Turkey—Otolaryngology-Surgery—Solo or group—Connecticut Medical License.

Jacob Wachtel—Age 50—M.D. Vienna University Medical School 1933—Internship Metropolitan Hospital, NYC 1947-48—Anesthesiology—Connecticut Medical License.

Harry Sherman—Age 53—M.D. Long Island College of Medicine 1930—Ophthalmology—Solo.—Connecticut Medical License.

Artin Telfeian—Age 33—M.D. French Faculty of Medicine, Beirut, Lebanon 1952—Surgery-Group practice-associate—Connecticut Medical License.

Vincent J. Morrissey—Age 54—M.D. Georgetown University 1932—General Practice.

John Del Campo—Age 44—M.D. Lausanne, Switzerland 1947—Surgery.

Any member of the Society knowing of opportunities for placement of these physicians is asked to communicate with the Executive Secretary's Office, 160 St. Ronan Street, New Haven.

PLACEMENT OPPORTUNITY

A pediatrician in New Haven County is considering taking a full-time position and will probably withdraw from a well-established pediatrics practice before the Fall. He is interested in communicating with a qualified pediatrician to take over his office, equipment and lease. Anyone interested is asked to write to the Executive Secretary, 160 St. Ronan Street, New Haven, Connecticut.



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Special Article

Is Your Emergency Ward An Asset Or A Liability To Your Hospital?

JAMES H. SPENCER, M.D., F.A.C.S.
Newton, New Jersey

THE assumption that the emergency ward of a hospital could be a liability might seem paradoxical—yet it can be true. In order to avoid any involvement in hazy semantics let us agree that by the emergency ward we are considering that department of the hospital to which come patients needing emergency care. This is in contrast to the regular admitting office to which patients come when their hospital admission has been premeditated, and to the various clinics operating on fixed schedules. We may call it the accident room, the accident suite, the emergency room, the emergency ward or by any other term as long as we keep in mind that it is where the public comes for medical help in a hurry. If we fail to accept the public's definition of the emergency ward, we take the first step toward making it a liability rather than an asset. Just as a physician must assume that any patient coming to his office needs medical care or at least medical attention, so must the emergency ward attendant assume that the patient who appears in this department needs prompt attention.

CONCEPT OF EMERGENCY SUITE

Shortliffe¹ and his associates at the Hartford, Connecticut, Hospital state their basic concept of a hospital emergency suite as follows: "An emergency service should offer to the public at large and the medical community in particular adequate facilities in which the emergencies of the area could be handled."

Howell and Buerki² have stressed the public relations aspect among the many facets of emergency room care in the hospital. They state, "The emergency room could be a major source of expert diagnosis and treatment in almost any community, a vital factor in public relations since its professional reputation often rides on the fate of patient care in its emergency unit."

That many hospitals are called upon to go beyond the accepted functions of the emergency ward

in the operation of this department is well known. This added patient load in the emergency ward may be the result of a difference of opinion between doctor and patient as to what constitutes an emergency. It may be an attempt on the part of the patient to bypass the doctor in his search for medical care. This plan may be motivated by a desire on the part of the patient to avoid the doctor's fee. In some communities this effort backfires, for the patient winds up with a hospital bill, plus the doctor's bill, when the latter might have been sufficient. Who is to say that he is not getting his just deserts? The increased use of the emergency ward may be the result of the doctors' taking patients there for minor surgical procedures which they used to do in their offices, and, perish the thought, it has even been suggested that doctors may send patients to the emergency ward rather than to more competent fellow practitioners when they do not feel quite up to dealing with the patient's problem. The lack of availability of doctors at night, and on weekends or holidays has also been mentioned. Whatever the reason for the growing use of the emergency wards for real emergencies and for medical care of a less urgent category, the problem is there and must be faced. A concerted effort to re-educate patients in the value of the family doctor would probably help to lessen the load on the emergency rooms, but no effort along this or any other line will reduce the number of situations where an emergency ward is really needed by both patient and doctor.

REQUIREMENT: INTEREST IN TRAUMA SURGERY

References to the effect of increased mechanization and speed on our way of living have been repeated ad nauseam, but until the medical profession and its institutions of learning recognize this effect and prepare for it, the references must continue. The indifference toward adequate teaching of good care of the injured has been the concern of many proponents of such care for years. This was in the minds of the group of men who organized the American College of Surgeons' Com-

mittee on Fractures many years ago, and still in their minds when they increased the scope of this committee's activities by changing the name to the Committee on Trauma. It was this concern that moved Griswold³ to say at a meeting of the American Medical Association more than a decade ago, "The surgery of trauma is the oldest and the most important form of surgery, yet in teaching and in practice it is, even today, the most neglected form of surgery except for brief interludes during war." He goes on to say that this is "because of the neglect of the professional teachers in surgery, the teachers and the professors in our schools of medicine. The academic interests of these men have not been in the surgery of injury but in the more difficult and complicated though less common forms of surgical gymnastics."

He continues, "Instead of having an interest in the surgery of injury, many professors have been more interested in determining how many pounds or feet of the abdominal contents or how much of the pulmonary tree or the brain can be removed and still have a live patient."

If it is permissible to quote one's self, I will restate what I said in an address⁴ several years ago: "The departments of surgical research are combing the human body for new areas of attack. Blood trying to reach the liver by the portal vein is being shunted off in another direction, spoonfuls of cerebrum are being removed from the cranium, the pancreas, and adrenal glands are being roughly dealt with, and more and more nerves are being divided at their roots." I added that I was fully aware of the importance of these procedures and granted that the time might come when I would gladly submit to one of them, but that, "... right now my aspirations as a prospective patient are directed more toward the hope that, if I stick my hand into a buzz saw in my basement there will be an M.D. around who knows how to put tendons together." It was rather impudent of me to make these seeming wisecracks for it was a university surgeon who had suggested that I be invited to give the address. However, he was generous enough to tell me later that my point was well taken.

There are so many local, state and national organizations teaching and practicing good first aid that this area of the care of the injured seems to need less critical review than some others. I believe also that a scrutiny of what takes place after the injured patient is formally admitted to the hospital and definitive care started, or at least planned, would reveal that this phase of the care of the injured is fairly well covered in most communities. Certainly in the hospitals blessed with trained surgeons there is always someone who will thrill at the prospect for removing a ruptured spleen or fixing a fractured femur. It is in between that we find

the weak link in the chain. How can we get the trained physician to take an interest in the patient who might have a ruptured spleen and accept the challenge of staying by the problem until a solution is reached? How can we be sure that a competent physician will make a thorough search for other injuries less evident than the frankly fractured femur? When we can answer these questions we shall be well on the way to assuring ourselves that the emergency ward is an asset and not a liability.

EMERGENCY ROOM SURVEYS MADE

It was the desire to get the answer to these and other questions concerning emergency ward care that led a group of New Jersey surgeons to plan a critical survey of these facilities in the hospitals in that state. This program is currently the number one objective of the College's New Jersey Regional Committee on Trauma. It has had the official approval of the New Jersey Hospital Association. The surveys are made at the request of hospital administrators by teams of volunteers from other hospitals. Most of the survey teams to date have been made up entirely of surgeons, usually three in number, but in some cases an administrator from another hospital is on the team. It has been my experience in serving on several of these teams that, while the purpose of these visitations is to help the hospital visited, I have never failed to learn something that I can bring back to my own hospital or pass on to others. Some of the good points as well as the weaknesses picked up in these surveys are worth recording. Although we use a rather detailed check list in these surveys, the data collected and used for evaluation of any emergency ward may be entered under two headings: (1) physical facilities, to include space, equipment and supplies; and (2) organization and personnel.

My observations in connection with these team surveys have been augmented by visits to eight hospitals ranging from 75 to 350 beds in the states of Ohio and Pennsylvania. My main objective in visiting these hospitals on either side of the Ohio-Pennsylvania border was to see and learn something about emergency rooms in community hospitals.

From the standpoint of physical facilities many hospitals have suffered from the ignorance of hospital architects about such matters and the failure of medical staffs to insist on adequate and conveniently arranged space. Rooms that are too small in size and in number and poorly located with regard to entrances and exits and relationship to laboratory and x-ray facilities are glaring weaknesses often seen.

However, pleasant surprises are occasionally encountered. I recently visited a 60-bed hospital

where four rooms connected to each other by a corridor were available for care of accident cases. These rooms provided adequate space for seven tables or stretchers on which injured patients might be treated, and five of these were in place ready for use. One of the rooms was known as the "emergency room" and was used when only one or two patients required stretcher care at the same time. The second room was actually the "recovery room," but its location and equipment made it available for the adequate care of seriously injured patients. It has always seemed to me that the facilities of a well equipped recovery room are ideal for dealing with many of the complications of the seriously injured patient, since these complications are likely to be the same as those seen immediately following major surgery. The other two rooms in this suite were adequate in size and the lighting was superior.

However, the most impressive feature of this whole set-up was the arrangement and labeling of the supplies. A very complete supply of equipment, drugs, plasma expanders, et cetera, was conveniently stored in easily opened wall cabinets with large numbers on their doors. On the wall, in fact covering an area about eight by ten feet, was a complete index of the supplies in large block letters with the cabinet numbers where each item was stored opposite the item. The members of the survey team were loud in their praise of the whole physical set-up. Feeling that we ought to offer some constructive criticism I suggested that they change the label on the "tracheotomy" set to "tracheostomy." It was the only thing I could criticize, but of course the important thing was that the set was there ready to use and not off somewhere in a central supply room with the key in a supervisor's pocket.

ARCHITECT AND DOCTOR COLLABORATE

This hospital building is quite new. The plans were drawn by a very competent young architect who does not pose as a specialist in hospital planning. The medical staff is made up almost entirely of general practitioners, but someone obviously had a good conception of accident room care and got together with the architect, with a good result.

Lighting is a deficiency in some emergency rooms and one easy to correct. Good treatment tables are also easy to get but require considerable funds. There are a number of satisfactory makes, but the best ones will cost from four hundred dollars upward. The hydraulic types will cost well over that figure. A good table for the treatment of severely injured patients should be one on which any necessary procedures may be carried out. It should be a combination operating table and wheeled stretcher. The wheels should lock. It should be

easily adjustable to the shock position and should have easily attached standards to hold flasks of blood or plasma expanders so that these can go with the patient wherever he goes. It should have provision for carrying oxygen, making it unnecessary to push a tank along beside the table. Stirrups for the lithotomy position are an asset in certain situations and of course arm boards and restraining straps are frequently needed. Removable side rails will prove valuable at times, particularly if there is a personnel shortage and a patient is irrational. These tables should be planned with the idea that the severely injured patient will be kept on them until such time as he is transferred to an operating table or to his own bed. They should eliminate the transfers to other stretchers, x-ray tables and back to stretchers.

The adequately equipped emergency ward will have good instruments. There is no excuse for faulty hemostats, worn-out tissue forceps, an inadequate assortment of needles or lack of anything else that may be needed in a hurry. This is an operating room that is ready to go, not one where elective surgery is scheduled and the instruments can be picked out the night before. Anesthesia and resuscitation equipment should be there and in working order at all times. The requisition of this equipment from the main operating rooms is definitely substandard practice. The gas tanks on these machines should be regularly checked in the daytime. There may not be time to replace empty tanks in the middle of the night. That same supervisor who has the key to central supply may have the key to the gas tank storage room. Many of these details are overlooked in good hospitals simply because no one has thought of them. They should become part of a regular routine.

Important as the physical facilities and equipment are, there is a much more important facet of good emergency ward care, the personnel. My visits to emergency rooms in other hospitals have brought out some interesting facts and in some places have plainly shown the level to which the care of the injured is relegated by those who should be most interested. At one 75-bed hospital in Pennsylvania where there are two board certified surgeons on the staff, the administrator showed me the emergency room with justifiable pride. I then asked him about the professional coverage of this department and he explained the rotation system of the several general practitioners in the town. I asked him if the surgeons didn't share in this responsibility too and he replied, "Oh no, they are too busy, but of course they will come if an operation is necessary." This is relegating surgery to the realm of sterile technical gymnastics, rather than a responsible specialty.

This phase of emergency room organization is the hardest of all to evaluate in the other fellow's hospital. It is a touchy subject and particularly so because so many hospitals have failed to realize the importance of training, experience and serious interest in this type of work. They may have clear-cut rules with regard to major and even minor surgery upstairs and a good workable system of supervision of the younger, less experienced members of the staff, but in the emergency room the attitude may be that any doctor is all right. If it is a hospital with residents and interns, this "dirty work" may be turned over to the least experienced interns without even resident supervision. In fact the residents, who should be getting supervised training in this department, may not even have the opportunity to work there and thus may be missing an experience that might be most valuable to them when they enter private practice. If it is a hospital without interns or residents, the emergency room may be covered by indifferently trained and disinterested doctors, because those who might be more capable are too busy with what Dr. Griswold calls "the more difficult forms of surgical gymnastics."

The proper staffing of an emergency ward is one of the most difficult problems in hospital staff organization. If the hospital is large and there is a group of surgeons keenly interested in the surgery of trauma, the solution is much easier, but it must be borne in mind that the admissions are not all surgical. There are some grave medical emergencies requiring just as prompt attention and as skilled judgment as the ruptured spleen. While I believe that, due to the high ratio of serious accidents as compared to serious medical emergencies, the responsibility for the emergency ward should be largely borne by the surgical department, a good working liaison should be established with the department of medicine. In fact, an ideal emergency ward organization will have available members of the medical staff from all departments.

The variety of situations that may arise offers an excellent opportunity for the really interested general practitioner to play on the team. The well qualified and conscientious general practitioner has my highest respect. He also has my profound sympathy if pseudospecialists, for mercenary reasons, encroach on his field of endeavor. The general practitioner begins to lose my respect if he, for mercenary reasons, begins to become a pseudo-specialist; by this I mean, starts to invade the field of major surgery for which he is not trained. There was a time when he needed to do this, but that was yesterday. If the surgeon and the general practitioner will stick to their knitting they will gain and deserve each other's respect and neither need

have any feeling of inferiority in the medical community. I have indulged in this little excursion into medical practice philosophy in order to point out the type of general practitioner who is not only qualified to be a good emergency ward doctor, but can fill the key position. If he is keen enough he can be the quarterback and he will have the confidence and respect of the other more specialized members of the team as well as the everlasting gratitude of the patient. It isn't a question of having an orthopedist or a general surgeon or a doctor with any other title in the emergency room, but of having a doctor who will see the whole patient, put first things first and get help if he needs it.

The selection of emergency room personnel does not stop with the roster of physicians. The team that surveyed the emergency room in my hospital reported that the nurse with whom they talked seemed well versed in the doings of that department, but pointed out that neither she nor any other nurse was regularly assigned there. We now have a regular emergency room nurse during the day shift and it is no longer necessary to call one of the floors and take potluck. Our evening and night supervisors cover those hours fairly well and don't often forget the keys. Other personnel, including nurses' aides and orderlies, need careful selection and at least a minimum of instruction for maximum efficiency.

We have found that the hospitals following standardized procedures in certain emergencies seem to get the best results. This is particularly true in burns and in the treatment of shock. The effective treatment of poisoning also calls for standardization as there is seldom time for trial and error methods in these emergencies. The establishment of a "poison center" in the emergency department of the hospital will be a great boon to the physicians working in the department and to physicians who may use the center for information by telephone. The properly set up poison center not only furnishes available antidotes for most known poisons, but is prepared to give prompt and accurate information regarding antidotes in answer to physicians' telephone calls. Strategically located larger centers make available around-the-clock service in response to calls regarding less known poisoning agents.

While a hospital disaster plan is not entirely a function of the emergency ward, it certainly should tie in with it.

In summary, observations of emergency rooms or wards in hospitals of various sizes have led to the conclusions that the best emergency room care requires:

1. Adequate space with due regard to proximity to laboratory and x-ray facilities.

2. Provision for friends and family of the injured, police and others whose presence in treatment rooms might be detrimental.

3. Satisfactory lighting.

4. Convenient treatment tables that also act as stretchers.

5. High quality equipment kept in this department and not shared with other departments.

6. Carefully selected and trained personnel including doctors, nurses, orderlies and aides.

7. Most important of all, a recognition of the major importance of this department.

Whether you have a survey by a team from elsewhere or not, I heartily recommend to each of you, that if you have emergency ward problems, you

try to get a carefully chosen committee representing administration, medical staff, and nursing service. If you do this, the emergency ward in your hospital will be an asset and not a liability.

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Around The State

Hartford County

Fred F. Tirella of Bristol has been appointed by the Yale School of Medicine to assist in the instruction of cardiology to Yale medical students.

Harry L. F. Locke of Hartford was recently awarded the Civitan gold honor key, highest award the Civitan can bestow, at their annual convention of the New England District.

Dr. Locke has been a member of the Hartford Civitan Club since 1932. He served as its president in 1940 and as international president in 1942.

Francis Braceland, Institute of Living psychiatrist-in-chief, recently spoke on "Growth in the Family" to a group of foster mothers. This meeting was sponsored by the Hartford County Committee for Children under Public Care of the Connecticut Child Welfare Association.

Appointed chairmen of the NAACP health jamboree in Hartford recently were Doctors Allen F. Jackson and Howard L. Warring.

Speaking before the Blue Hills PTA recently was Dr. Hilda Crosby Standish. Her topic: "How to Answer Your Children's Questions."

Doctors Harold S. Barrett, Reginald C. Edson and

William J. Lahey all participated in the Connecticut Tuberculosis Association program recently in Hamden. Doctors Edson and Barrett spoke on "Organizing To Do The Job," while Dr. Lahey spoke on "Programming To Do The Job."

Charles Roh has been elected president of the Greater Hartford Tuberculosis and Public Health Society. Elected to the directorship of the organization were: Dr. Alan A. Dun of Newington and Joseph L. Gordon, executive secretary of HCMA.

Andrew J. Canzonetti of New Britain was named recently as recipient of the first annual Good Government Award presented by the Greater New Britain Junior Chamber of Commerce.

Dr. Canzonetti was cited "for his untiring and unselfish devotion to the betterment of the community through his service as chairman of the Board of Education." (This is an elected position.) Dr. Canzonetti is a board surgeon.

Middlesex County

John Bellobuono, a graduate of the University of Liege Medical School, Liege, Belgium and S. V. Krishna Rao, a graduate of Stanley Medical College, Madras, India began their internships at the Middlesex Memorial Hospital recently.

Francis Korn, who interned at Middlesex and trained in radiology at New Haven, opened his

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office for the practice of his specialty in Middletown recently.

Anthony Piccirillo, who also trained in New Haven, has joined William Irving in the practice of pediatrics in Old Saybrook.

New Haven County

Derek John de Solla Price has been appointed as Visiting Professor of the History of Science for the academic year 1959-60. Dr. Price will be a member of the faculty of the Graduate School at Yale University and will give general lectures on the history of science to undergraduates and supervise advanced students in history in the Graduate School.

The Doctor's Office

William J. Bodie, M.D. announces the removal of his office from 256 Main Street to 162 Montowese Street, Branford.

William F. Eckhardt, Jr., M.D. announces the opening of an office for the practice of internal medicine in association with Dr. George W. Hebard at Elm Street and Kimberly Place, New Canaan.

George A. Garofalo, M.D. announces the opening of an office for the practice of general medicine at 1653 Main Street, Bridgeport.

John B. Griggs, M.D. announces the opening of an office for the practice of pediatrics in the Satan's Kingdom section of Canton. Dr. Griggs continues to maintain his office at 650 Farmington Avenue, Hartford.

George Alban Patterson, M.D. has joined his father, Dr. Frederick A. Patterson, in the general practice of medicine. Their office is at 6 Maple Street, Norwalk.

Samuel B. Rentsch, Jr., M.D. announces the opening of an office for the practice of general medicine at 101 New London Turnpike, Glastonbury.

John A. Vecchiolla, M.D. announces the opening of an office for the practice of internal medicine at 600 Asylum Avenue, Hartford.

Marvin P. Zimmerman, M.D. announces the opening of an office for the practice of internal medicine and cardiology at 117 South Main Street, Branford.

News From Washington

Approval Given Bill For Health Insurance

As predicted recently by WRMS, preliminary approval has been given a new bill authorizing medical care and hospitalization insurance for Federal employees and dependents. Introducing the bill (S. 2162) Senator Olin D. Johnston (D., S. C.) said it will be indorsed by Post Office & Civil Service Committee. Senator Johnston is its chairman. Companion bill will be sponsored in the House.

S. 2162, a compromise reportedly acceptable to Federal employee unions and insurance carriers, divides premium cost 50/50 between the Treasury and workers. Benefits would begin July 1, 1960. There is to be free choice among plans. Benefits may be on a cash indemnity or service basis. Major medical is on deductible, coinsurance plan.

Copies of the lengthy bill, as well as interpretive data, are obtainable without cost upon request to WRMS.

Social Security Easily Defeated By Delegates

Defeat of resolutions urging inclusion of self-employed physicians under social security has never been accomplished more easily. More and more state and local medical societies are turning up majorities, via questionnaire polls of membership, in favor of joining up with OASDI. Nevertheless, at the national level sentiment against participation was never stronger, regardless of rank and file trend.

New Policy Of Relations With Osteopathy Adopted

House of Delegates approved this policy to narrow the gap separating majority medicine from osteopathy:

1. As in past, voluntary professional associations between MD's and persons practicing systems of healing not based on scientific principles shall be regarded as unethical.
2. States shall be encouraged to amend their healing practice acts so that all who would practice as physicians and surgeons shall meet identical qualifications, take same examinations and grad-

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uate from professional schools approved by the same agency.

3. "It shall not be considered contrary to the principles of medical ethics for doctors of medicine to teach students in an osteopathic college which is in the process of being converted into an approved medical school under the supervision of the Council of Medical Education and Hospitals (AMA)."

4. AMA trustees are directed to appoint a liaison committee to meet with representatives of American Osteopathic Assn. on "problems of common concern, including inter-professional relationships on a national level."

DO's On Hospital Staffs

Just as the above represents a compromise with the less restrictive plan of reapprochement that was advanced by AMA's Judicial Council, the House of Delegates also modified a resolution seeking to permit osteopathic physicians to practice in hospitals without jeopardizing accreditation status of the latter.

This is the action which was taken: "The AMA representatives on the Joint Commission on Accreditation of Hospitals (shall) suggest to the Joint Commission that they inspect upon request and consider for accreditation without prejudice those hospitals required by law to admit osteopathic physicians to their staff."

Defense Department Reveals '59 Berry Plan Details

This year's medical graduates who are liable for military service will soon begin receiving invitations from Defense Department to apply for residency deferment (Berry Plan). Along with an information folder, the form (to be returned by Sept. 15) will be mailed to new MD's at their internship stations within next 30 days.

For the residency year beginning in July, 1960, the armed forces have 871 billets. By demand, the No. 1 specialty is psychiatry—130. Next in order are surgery, 123; pediatrics, 85, and internal medicine, 83. Ten places have been reserved for research, all by the Air Force. The same service has 40 places and Navy eight in general practice but Army shuns that category.

VA Research Fund Raised

Senate's intense interest in subsidization of medical research was demonstrated further last week in its handling of Veterans Administration's budget for 1959-60. In allowing VA slightly over \$5 billion, it made no change in House-approved bill other than to raise ante \$4 million (to a total of \$19,344,000) for medical research and \$3 million (total of \$33,159,000) for improvement of hospital facilities so as to speed up modernization of laboratories for clinical investigations.



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AMA Shifts Left On Free Choice And 3rd Parties

In approving recommendations of Commission on Medical Care Plans (Larson report), with minor changes, AMA has tried to make it easier for state and local medical societies to get along with co-operative clinics, labor-sponsored plans and closed panel groups providing medical services. Under expert handling of Dr. John S. DeTar, reference committee chairman, this touchy issue sailed through smoothly to the relief of AMA leaders who had feared a bitter fight on the floor.

What the autonomous state and local societies will do is one thing. But the national has now made it clear that it no longer bears animus per se against such programs as United Mine Workers, Kaiser, New York's HIP, etc. Its action is likely to encourage the labor health movement.

Interesting sidelight—The DeTar committee also considered a resolution, sponsored by Dr. T. M. D'Angelo of New York delegation, to support "free choice of physician (as) a fundamental principle, incontrovertible, unalterable and essential to good medical care." The committee recommended *against* adoption but House of Delegates, yielding to an appeal by Dr. D'Angelo, took the less severe step, "no action."

VA Grants Bigger Fees But Achieves New Goal

Veterans Administration started a new fiscal year July 1st quite satisfied with arrangements made with the states for compensation of doctors participating in the "home town care" program. Raises averaging 25 per cent have been allowed for surgical fees. Except for a few states which asked for no increase, the office visit fee will go from \$4 to \$5, with provision made for higher rates for certain specialized services.

In return, VA has won its point—over rugged opposition by AMA—that doctors shall submit both their bills and clinical reports to regional offices of the Federal agency. Heretofore, the report went to the regional office but the bill was forwarded to the intermediary agency, in those states where the intermediary system was in use.

South Dakota was the only intermediary state to reject a contract and withdraw because of VA's insistence upon monitoring both bill and case report. California, New York, Hawaii, Colorado, North Carolina, Oregon, Washington, Wisconsin and Michigan all came in again. Medical societies of 18 other states entered into letters of agreement, while in 25 other jurisdictions scales of payment of physicians for "home town" care will follow VA's Appendix A schedule.

Veterans Administration Home-Town Program

Paper work for the Veterans Administration home-town medical care program will be reduced substantially by a new system of mechanized records writing becoming effective July 1, the VA said today.

Under the nationwide home-town program, veterans with service-connected disabilities receive medical care at VA expense from some 38,000 private physicians of their choice, in areas where care at VA outpatient clinics is not available.

VA said the new records writing system will save considerable time for both the agency's personnel and private physicians in the program.

Forms to be completed monthly by the doctors have been reduced to two—a report of treatment rendered and the doctor's bill to the VA for his services. Both are designed to make his writing job brief.

The name and address of the private physician, the name and address of the VA office handling the forms, and the name and VA claim number of the veteran receiving treatment will be printed on the forms by VA addressograph plates. Use of window envelopes will make addressing envelopes unnecessary.

The doctor also will receive from the VA an annual authorization for treatment for each of his patients in the program, valid for approved treatment during the year as needed.

VA advises doctors participating in the program to mail their treatment reports and billing statements together to the agency, promptly at the end of each month.

These forms will be machine-processed by a punch-card system at VA regional offices following medical approval.

Advisors Report To PHS On Poliomyelitis Vaccine

PHS Surgeon General Leroy E. Burney has made public the recommendations of an advisory group which reviewed four years of experience with Salk vaccine against poliomyelitis. It re affirms the basic series of three injections for persons under 40. For infants up to age six months, a four-injection series is recommended. Meantime, Dr. Burney appealed for greater use of vaccination in the face of rising incidence of paralytic poliomyelitis.

Several scientific papers testifying to effectiveness and safety of the Cox-Lederle live virus vaccine were presented here last week at an international meeting on prevention of poliomyelitis. Its use in infants, pregnant women and children up to age 21 was described in some of the papers.



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Book Reviews

SYNOPSIS OF TREATMENT OF ANORECTAL DISEASES.

By Stuart T. Ross, M.D., F.A.C.S., F.I.C.S. The C. V. Mosby Co., St. Louis, Missouri, 1959. 240 pp. \$6.50.

Reviewed by ISRAEL E. BLODINGER

In a small, handy format the author presents a concise and well written book on anorectal diseases written with the general practitioner especially in mind. The anatomy of the anorectal structures is described and illustrated in an effective manner. The chapter on history taking and examination of the patient with anorectal disease should be required reading for every physician. The remainder of the volume covers most conditions of the anorectal region in a clear, simplified fashion with only the most effective surgical procedures described and well illustrated. All major surgical technics have been purposely omitted.

The reviewed has only one minor criticism—the author puts very little emphasis on the use of local anesthesia in the majority of the surgical procedures described. With such anesthesia many of these operations can well be done in a properly equipped office on ambulatory patients with a consequent financial saving to the patient while at the same time decreasing the overutilization of crowded hospitals.

For general practitioners, proctologists or general surgeons this small volume is a valuable addition to the library.

PATIENT CARE AND SPECIAL PROCEDURES IN X-RAY

TECHNOLOGY. By Carol Hocking Vennes, R.N., B.S. and John C. Watson, R. T. The C. V. Mosby Company, St. Louis, Missouri, 203 pp. \$5.75.

Reviewed by ROBERT M. LOWMAN

A verbatim copy of the foreword would probably be the best review of the book which is so successful in fulfilling the aids stated by the authors. The book answers a need long sought for by x-ray technicians. Indeed, the presentation should be of great aid to the nursing profession in the better understanding of the problems of an x-ray department in the preparation, the care and the treatment of patients. One important contribution of the book may be a source of information to the nursing group in the preparation of the patient for examinations to be done so that the patient may know what is to be expected. The authors have extracted material from many sources which can be important both to nurses and x-ray technicians, not only during their training period, but this information can be useful in the working of a hospital department or in x-ray practice. Hitherto, the material contained in this book was widely dispersed in different texts and articles making it difficult for technicians and nurses to avail themselves of this information. This text should prove a welcome addition to schools and nurses interested in improving their training programs in x-ray technology; their care and handling of patients. It should do much to aid in integrating and establishing good patient-x-ray technician and nursing relationships.



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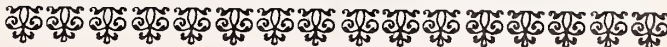
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FAMILY AND CLASS DYNAMICS IN MENTAL ILLNESS
By Jerome K. Myers, Ph.D. and Bertram H. Roberts, M.D.
John Wiley and Sons, Inc. New York, New York, 1959. 295
pp. \$6.95.

Reviewed by RICHARD KARPE

The pioneering effort of Fredrick Redlich's joint efforts with a multidiscipline group of psychiatrists and sociologists produced a second volume on sociological factors in mental health and illness. The co-authors of this book were members of Redlich's research team. This book is a more detailed study than the first publication. The first volume under the title "SOCIAL CLASS AND MENTAL ILLNESS" by Hollingshead and Redlich represented a psychiatric census of all psychiatric patients in New Haven at a certain time and a comparison of that survey with a control sample. This new volume now represents the second phase of the research, which the authors call the controlled case study. This study tries to explore the relations between the position in a class system and psychodynamic factors in mental illness, besides that the factor of social mobility in psychiatric disorders is investigated.

Class III patients are compared with Class V patients. In Class III patients the authors find more psychoneurotic reactions as the result of intensive guilt and shame feelings, whereas in Class V patients the reactions to stress lead to impulsive and violent antisocial behavior or to psychosomatic symptoms. This book awakens again in us the memory of the tragic death of a young promising psychiatrist who died in a boat accident in the aftermath of a hurricane five years

ago in the summer of 1955. That he was absent in the final formulation is felt, however, in some lapsus linguae such as calling the psychoanalyst adhering to the Freudian procedure as "orthodox" or misunderstanding Freud's views as purely biological, forgetting that Freud introduced a sociological phenomenon like the family situation under the name of Oedipus complex into psychiatry. I assume that the late Bertram H. Roberts would not have passed such formulations.

This book fulfills an important purpose if it contributes to the awareness in the medical doctor of sociological factors in the origin of sickness and choice of treatment.

THE DIFFERENTIAL DIAGNOSIS OF ABDOMINAL PAIN. Edited by Sherman M. Mellinkoff, M.D. McGraw-Hill Book Co., Inc., New York 36, New York, 1959. 374 pp. \$7.50.

Reviewed by MARK A. HAYES

This monograph is the second in a projected series of publications by the University of California Medical Extension. The term extension implies this is a supplementary type of postgraduate education. The contributors to this volume are distinguished and capable physicians representing specialty fields of practice to which the title of the monograph well applies: Almy—Gastroenterology—Cornell; Goodwin—Urology—U.C.L.A.; Mellinkoff—Medicine—U.C.L.A.; and, Richards—Surgery—Stanford. Conspicuous by

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his absence is a representative from Gynecology.

The organization of the monograph is excellent as the preface hints, in charting the course between the Scylla of operative treatment and the Charybdis of nonoperative treatment—each equally disastrous under the wrong circumstances.

The first section by Dr. Almy is an impressive scholarly presentation of pain mechanisms and the fundamental developmental and neuroanatomical basis of direct and referred pain. This reviewer believes all physicians could benefit greatly by a careful perusal of this section. The same author extends the basic considerations of pain mechanisms to applications in specific disease entities in Section 2. The combination of these two presentations, to my way of thinking, comprises a classic presentation.

Introducing surgical diseases of the abdomen and pelvis, Richards in a carefully detailed fashion emphasizes the importance of the technique of obtaining “the accurate history.” The history is followed by a recapitulation of the proper maneuvers in doing a physical examination—often short-circuited these days in my opinion to the radiology department or the chemistry laboratory; specific rather than survey types of ancillary diagnostic studies are properly emphasized by Richards before he embarks on the details of specific clinical syndromes, each of which is presented lucidly and masterfully.

As the reader might anticipate, Goodwin’s presentation on retroperitoneal causes of abdominal pain follows the section in intraperitoneal disease. Goodwin’s anatomical orientation is excellent and is a perfect introduction to his clinical discussion which thoughtfully includes common pitfalls in diagnosis and recommended studies.

The climax of the monograph is the brilliant presentation of systemic illness and diseases remote from the abdomen causing abdominal pain as well as consideration of recurrent or chronic abdominal pain by Mellinkoff.

This reviewer urgently advises all specialists and generalists to put aside their current medical reading and assiduously devote a few days to the study of this monograph to his own aid in the improvement of his patient care. One of the tragic problems of an age of over-specialization has been the inability of the specialist to recognize his deficiencies outside his own field, and the corollary, his unwillingness to correct this deficiency by accepting advice from other specialists.” (Bean, W. B., *The Pharos of Alpha Omega Alpha*, 19:13-18, February, 1956)

Prescription

Canada’s first prepaid prescription cost insurance, organized by five Windsor, Ontario, druggists, now has 75 of the county’s 85 pharmacies as members. Customers pay a monthly membership ranging from 95¢ a person to \$3.65 for a subscriber and four dependents. Subscribers then pay a flat fee of 35¢ for each prescription filled. Ten per cent is deducted from member pharmacists’ monthly bills to cover cost of processing statements.

Special Notices

The following meetings will be held on Wednesdays in the Eye Clinic at Grace-New Haven Hospital, 789 Howard Avenue, New Haven at 8:00 p.m. to ophthalmologists in the State. For further information, contact Dr. Arthur Ebbert, Assistant Dean, Yale University School of Medicine, 333 Cedar Street, New Haven:

PRINCIPLES OF OPHTHALMIC SURGERY

- September 9
 - Enucleation and allied procedures
 - Dr. Carlton Phillips
- September 16
 - Kronlein procedure and exenteration
 - Dr. Andrew Wong
- September 23
 - Lacrimal sac surgery
 - Dr. J. Alexander vanHeuven and Dr. Rocko M. Fasanella
- September 30
 - Strabismus
 - Dr. Clement C. Clarke
- October 7
 - Lid plastics
 - Dr. Clement C. Clarke
- October 14
 - Lid plastics
 - Dr. Clement C. Clarke and Dr. Stuart Kaye
- October 21
 - Goniotomy and goniotomy
 - Drs. Eugene M. Blake and Ernest Rosenthal
- October 28
 - Iridenceleisis and suprachoroidal iridenceleisis
 - Dr. Francis P. Guida
- November 4
 - Elliott trephine, cyclodiathermy, scleral iridectomy
 - Dr. Frederick A. Wies
- November 11
 - Cyclodialysis and iridectomy
 - Dr. Bernard Zuckerman
- November 18
 - Cataract surgery
 - Dr. William Glass
- November 25
 - Retinal surgery and light coagulator
 - Dr. J. Alexander vanHeuven
- December 2
 - Intraocular foreign bodies
 - Dr. Frederick E. Mott
- December 9
 - Corneal transplants
 - Dr. Rocko M. Fasanella
- December 16
 - Pre and post-operative care
 - Complications of cataract surgery
 - Dr. Leonard Flom



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Peter P. Barbara, Ph.D.

Statement Of The Connecticut State Medical Society

Re: H.R. 4700, 86th Congress

Social Security Amendments of 1959 — House Ways and Means Committee

July 14, 1959

Ellwood C. Weise, Sr., M.D.

I am appearing here today as the representative of the thirty-two hundred and twenty physician members of the Connecticut State Medical Society, who have authorized me to present the views of the medical profession in my state concerning the "Forand Bill", H.R. 4700.

It is the considered opinion of our Society that H.R. 4700 is not merely another program which, if enacted, must of necessity increase the already heavy burden of taxation on all the people. While the unquestionably tremendous cost of this scheme is a matter for major concern to every taxpayer, our examination of the Forand Bill has disclosed in it a basic but undeclared provision which is of far greater importance to Americans than money. This well concealed foundation, on which all of the other provisions rest, reflects a philosophy which we believe to be foreign to our way of life and one which seeks to make legal the abrogation of the cherished freedoms of every man, woman and child in the nation. Connecticut doctors have always viewed Forand-type bills as pieces of "foot in the door" legislation, which are designed to further break down the traditional American system and open the way for full-scale government control of our economy. Once the basic freedoms of those who provide medical care have been surreptitiously taken away, the writing will be on the wall for every other productive segment of our still comparatively free society. Nor will the inalienable rights of the present and future recipients of medical care on these terms remain inviolate.

This was the primary reason which caused our House of Delegates, on April 29, 1958, to go on record as "being opposed to the Forand Bill and allied bills." This opposition was neither blind nor selfish nor political. Since 1958, our attitude toward the Forand Bill has not changed. We still consider it to be a costly, ill-conceived and potentially dangerous legislative measure to which WE ARE UNALTERABLY OPPOSED.

Over the years, refinements and modifications of the original proposals have been made, each designed to entice first one group in the medical care field and then another into lending their support to the bill. These several enticements have not had

their planned effect. They have not been successful because they have failed to conceal the basic danger of the program. We fervently hope that the members of this Committee will consider it significant that as recently as June, 1959, a joint statement was made by the Joint Council to Improve the Health Care of the Aged, which was subscribed to by representatives of the American Medical Association, the American Hospital Association, the American Nursing Home Association and the American Dental Association. . . .

"All four member organizations of the Joint Council are unequivocally opposed to compulsory government health insurance for any segment of the population."

It has been frequently stated by some that organized medicine merely opposes legislation; that it has a negative attitude and that while rejecting the hastily contrived solutions to health problems offered by others, proposes none of its own. If indeed such statements were ever true in the past, it has been forcefully demonstrated that this is not the case today. Under the competent direction of the American Medical Association, component state and county medical societies all across the nation have been diligently working to determine the health care needs of the aging and are giving their fullest cooperation to allied health agencies in the development of prepayment and insurance plans to meet these needs. This job is being done by people who are really qualified to undertake it and they are making almost unbelievable progress toward their goal, all within the framework of a free society and at almost no cost to the government.

Connecticut physicians are actively participating in this work. Through the Connecticut State Medical Society, they have been represented at the First National Conference of the Joint Council to Improve the Health Care of the Aged. In preparation for the White House Conference on the problems of the aging, to be held in 1961, our Committee on Aging is planning to hold joint meetings with Connecticut chapters of the American Dental Association, the American Hospital Association and the American Nursing Home Association and to participate with these agencies in a New England Re-

gional Meeting for the purpose of working out methods of providing medical care to our senior citizens at reasonable cost. On April 28, 1959, our House of Delegates unanimously adopted the resolution . . .

"That the Connecticut State Medical Society pledges its continued support to the development of effective health and prepayment programs for all individuals, including those over 65."

The Society is conducting a relative value study which will be of aid to Blue Shield and private insurance carriers in making better programs with broader coverage available to those over 65 at the lowest possible cost.

In pursuing these several efforts, some rather startling facts have come to light.

1. There are approximately 200,000 residents of Connecticut over age 65.
2. Of these, well over half have some form of insurance against hospital costs, more than 100,000 being entitled to protection by Blue Cross alone.
3. In addition to some 16,000 covered by welfare agencies on the state level, a very substantial percentage of our senior citizens have found it financially possible to insure themselves against the cost of physicians' services. This large number has increased by literally tens of thousands since the first of the current year. Two private carriers had a tremendous enrollment of new members during the months of January and February and other private companies are beginning to report similar experiences.

Connecticut Medical Service, our Blue Shield plan, reports that over 26,000 subscribers covered under group plans are over age 65 and that there are additional thousands who have retained coverage on an individual basis since their retirement. On April 1, 1959, Connecticut Medical Service offered for sale its Society-approved individual contract and, in the first three months, enrolled some 6,000 new subscribers over 70 years of age as well as over 6,500 new subscribers in the 60-69 age group.

4. Most of this insurance coverage is reasonably adequate and, with the cooperation being given by the medical profession and other groups, will be made more complete in the near future and without greatly increasing its cost.
5. While, as physicians, we are primarily concerned with medical service, our evaluation of the cost of such service as being almost prohibitive under government control, is shared by others.

The widespread unrest of Americans as they watch the soaring costs of government ventures is reflected in our press every day.

An editorial in the July 9, 1959 issue of the New Haven (Connecticut) Journal-Courier entitled "'FREE' MEDICINE IN ORBIT" is a recent example. It cites the dismal financial experience of Britain's National Health Service as a warning and states that "In the first full year of operation, 1949-50, the so-called 'free' health service cost £440,000,000 to operate, which was nearly triple the amount of the estimate when the law was passed. . . . In 1958, the cost really zoomed into financial outer space—to £705,000,000. . . . This year the service is going to cost more still—£740,000,000, or \$2,000,000,000. And Britain has a far smaller population than the United States, and all prices and costs are much lower there than here."

It would appear then that, in Connecticut, there is actually little need for the costly and freedom-restricting measures which are proposed in the Forand Bill, and that such remaining need for medical care of the aging as still exists is being rapidly dissipated by voluntary plans and local community responsibility. We are confident that this experience will be shared by most other states. We feel that, whatever their intent may be, the knowledge, the interest and the judgment must be seriously questioned with respect to those who demand haste in meeting the health needs of the aging and who continue to insist that it must become a function of the federal government. When any individual (or group) starts out to do good, he must consider carefully whether the immediate good which may result will not be more than outweighed by the ultimate harm which may be done, not only to those who were supposed to be benefited, but also to other groups of the society and even to society as a whole.

Gentlemen, this concludes the statement of the Connecticut State Medical Society. It is our sincere recommendation that H.R. 4700, 86th Congress, *not* be favorably considered by this Committee.

The Hezekiah Beardsley Club

The Hezekiah Beardsley Club is the pediatric section of the Connecticut State Medical Society. Membership is open to all members of the Society, regardless of specialty, who are interested in pediatrics and pediatric problems. The club is anxious to stimulate new membership throughout the state. Anyone who so desires should write to the club's secretary: Paul Goldstein, M.D., Secretary, Hezekiah Beardsley Club, 1523 Chapel Street, New Haven.

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The 1959 Clinical Congress will be concentrated in one day and all of the meetings will be held at the Grace-New Haven Hospital and the Yale School of Medicine.

Two sessions will be held simultaneously in two different meeting places giving a broad selection of topics. Registration for members of the Society will be \$5.00 and provides for admission to all sessions of the Congress.

Hospital residents and interns will be admitted without charge, if a statement of their position, signed by an official of the hospital, is presented to the registration desk.

PRELIMINARY PROGRAM

September 30, 1959

9:00 Registration

BRADY AUDITORIUM

Paul F. McAllenney, Jr., New Haven, presiding

9:30 **DETECTION OF BLEEDING AND CLOTTING PROBLEMS IN CHILDREN**
Louis Diamond, Boston, Massachusetts

10:30 **PRESENT STATUS OF IMMUNIZATION WITH ORAL, LIVE, ATTENUATED, POLIOVIRUS VACCINE**
Albert B. Sabin, Cincinnati, Ohio

11:30 **INTERMISSION**

Howard Levine, New Britain, presiding

11:45 **CLINICOPATHOLOGICAL CONFERENCE**
H. M. Zimmerman, New York

1:00 **LUNCHEON**

Oliver J. Purnell, Rockville, presiding

2:30 **MANAGEMENT OF CARDIAC ARREST**
Hugh E. Stephenson, Jr., Columbia, Missouri

3:30 **RATIONAL BLOOD REPLACEMENT IN THE SURGICAL PATIENT**
Fred H. Allen, Jr., Boston, Massachusetts

FITKIN AMPHITHEATER

Marvin Lillian, New Haven, presiding

9:30 **HYPEREXIA NERVOSA**
Alvan R. Feinstein, New York

10:30 **CHEMICAL STUDIES AND ANXIETY**
Mandel E. Cohen, Boston, Massachusetts

11:30 **INTERMISSION**

William J. Lahey, Hartford, presiding

11:45 **CLINICOPATHOLOGICAL CONFERENCE**
Ivan L. Bennett, Jr., Baltimore, Maryland

1:00 **LUNCHEON**

Gray Carter, Greenwich, presiding

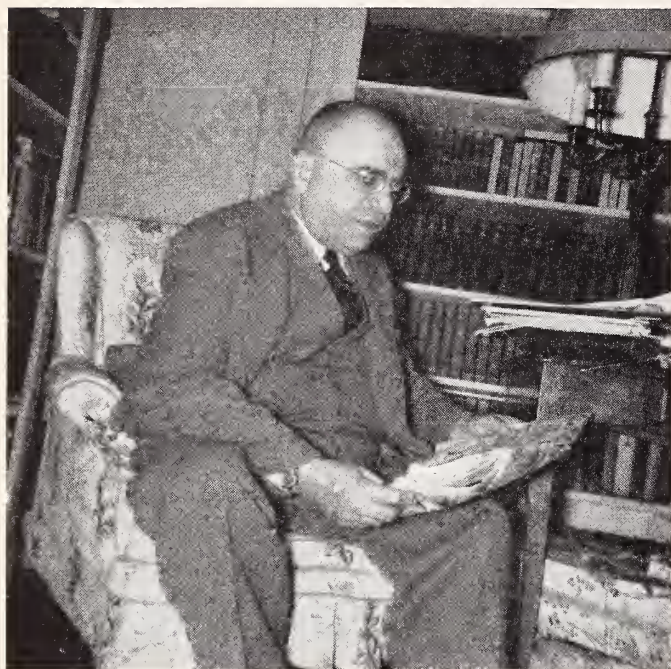
2:30 **HEART DISEASE IN PREGNANCY**
Harold Gorenberg, Jersey City, New Jersey

3:30 **URINARY TRACT INFECTIONS**
Paul B. Beeson, New Haven

Make a note of this date on your calendar

Obituaries

Daniel F. Levy, M.D.
1893-1959



The medical community in our state and his home city, have suffered a great loss in the passing of Dr. Daniel F. Levy, on June 13, 1959.

Dan, as he was affectionately known, was born in New Haven to Isaac and Pauline Schoenberger Levy, on March 12, 1893. Early in his youth, he began to show his remarkable aptitude for science, and his interest in scholarship. After graduating with honors from the primary and Hillhouse High School, he entered Yale's Sheffield Scientific School, where as a student in the pre-medical sciences, he came under the influence of Chittenden, Mendel, and Underhill, the giants of that day in the field of physiology and biochemistry. He was graduated from Sheff in 1915, having attained membership in Sigma XI, the honorary society.

He served his internship at the New Haven Hospital, and then entered private practice in this community. During the early days of his practice, he found time to serve as both teacher and tutor in mathematics and in the sciences in several preparatory schools. His keen mind and his rich fund of information gradually developed for him high regard throughout the state in the field of legal medicine. In this area, the bar and bench held his opinion and his integrity in the highest esteem.

He found time also to serve in, and to participate in, the activities of the New Haven Medical Association, where he served as president, and the New Haven County Medical Society, where he was

elected to the same office. On a city wide level, he took part in many activities, including the Probus Club and the Masonic Order. He is survived by his loyal wife, Missy Still Levy, and two daughters, Mrs. Leon Rubin, of Manchester, and Mrs. Paul Palten of Hartford. Dr. Nathan Levy of Branford is his brother, and he has two other brothers and sisters and six grandchildren.

Our departed colleague was characterized by the most profound thirst for knowledge, by his thorough familiarity in the Classics, Latin, Greek, and Hebrew. It always seemed to him, that he hadn't quite enough of knowledge and of science, ever seeking more.

His terminal illness of several years was an extremely severe and crippling gouty status. This he bore with remarkable and uncomplaining fortitude, always more considerate of those around him than of himself. His was a great soul and a gigantic mind, and his loss will definitely be felt by many.

MAXWELL LEAR, M.D.

Wendelin G. Luckner, M.D.
1910-1959

Dr. Wendelin G. Luckner, 49, and his son, Mark, 16, of Stafford Springs, were drowned in a tragic boating accident at Moosehead Lake in Maine on June 23, 1959.

Dr. Luckner was born in Bridgeport March 11, 1910, and graduated from Bridgeport High School and Junior College of Connecticut in 1930. Following this, he received A.B. and M.A. degrees from the University of Kentucky, where he also served as instructor in Biology for one year. His M.D. degree was earned at Jefferson Medical College in 1938, and he received interne and surgical resident's training at United Hospital, Port Chester, N. Y. He began practicing medicine and surgery in Stafford Springs in 1940, and established a very large practice there.

At the time of his death, Dr. Luckner was serving as secretary of the medical staff of the Johnson Memorial Hospital, where he was a member of the medical and surgical staffs. He was Medical Examiner for the towns of Willington and Ashford; a member and former President of the Tolland County Medical Association; a member of the AMA and the Rotary Club of Stafford. He was also an officer in the Medical Reserve Corps.

Dr. Luckner is survived by his wife, Marion Tierney Luckner, and his younger son, Kurt, 13. His tragic and untimely death has left a great void in the Tolland County Area, where he was widely known, loved and respected. Hundreds of people visited the funeral home to pay their last respects to this outstanding man, and to his son, Mark.

R. BRUCE THAYER, M.D.



Studies On The Virus Of Measles*

JOHN F. ENDERS, PH.D.**

Boston, Mass.

IN this second of the Griswold Lectures that I have been privileged to give I propose to outline the results of recent studies on the nature and properties of the measles virus. But before beginning, I wish to express to Dr. Leonard and his associates my warmest appreciation of the unusual distinction they have conferred upon me in twice asking me to speak on this occasion.

I also want to thank them for the opportunity of returning to this hospital to which I am attached by so many personal bonds.

Although we are warned by literary authorities not to begin a letter or a speech with an apology, I shall here disregard this usually sound advice. I do so because when people, most of whom are not medically trained, ask me about our present work and I tell them that among other things we are busy studying the measles virus, often a look of surprise is followed by a polite but obviously perfunctory question or two and then the subject is quickly changed. Clearly through the minds of those who react in this way the silent thought has passed: "Everyone has measles. It is uncomfortable but only rarely serious. Practically everything is known about it and it can easily be prevented or modified with gamma globulin. Why do you continue to waste your time investigating the ways of the comparatively innocent cause of this humdrum disease when you might have a chance of contributing something to more important problems such as the possible role of viruses in cancer or the present fragmentary knowledge of serious viral diseases such as infectious or serum hepatitis."

While this in the main is the view of some lay persons, it is perhaps occasionally shared by physicians who, with considerable justification, may regard with a jaundiced eye the results of studies on measles virus—results that might lead to still another vaccine to be added to the already rather formidable array now confronting the young child.

By way, then, of apology for the researches I am about to summarize, I would emphasize as our leading motive in undertaking them, the desire simply to find out more about the biological, pathogenic and immunological properties of an ubiquitous, but hitherto rather elusive viral agent. From such studies, for example, one might eventually learn something of the factors responsible for the virus's admirable adaptation to its living environment,—factors that, amazingly enough, appear to have remained essentially unaltered throughout the incalculably enormous number of replications of the viral particle within its natural host which have taken place over the centuries.

Accordingly, just as there is a fascination of its own kind in attempting to elucidate the etiology and pathogenesis of rare and poorly understood conditions, for us there has always been a charm in the pursuit of more information concerning those infectious diseases which like measles and mumps might be called in the vernacular "common garden varieties." Furthermore, the mere fact that certain of their features, in spite of much study, still remain obscure presents a challenge to further effort. From the practical standpoint the high frequency and relative benignity of these childhood diseases offer the laboratory worker not only the means of easily obtaining materials for his investigations but the opportunity of testing, without grave risk, any

*Presented at the Hartford Hospital Amphitheater, Jan. 31, 1959.

**Chief, Research Division of Infectious Diseases, The Children's Medical Center, Boston, and Professor of Bacteriology and Immunology at the Children's Hospital, Harvard Medical School.

prophylactic or therapeutic procedures that may emerge from his researches.

HISTORICAL SUMMARY

As is always the case, the significance of the recent experimental work on measles virus that I am about to review can best be appreciated when the results of earlier investigations are clearly in mind. I shall, therefore, take a few minutes to recapitulate the relevant findings of previous workers. These fall into two general categories: First, those relating to the nature, isolation and propagation of the causative agent in the laboratory; second, those relating to the capacity of the virus to induce active immunity in animals and in man.

The experimental approach to the study of measles has a rather venerable history. It began in the late 18th century with Home, who inoculated blood from patients taken in the acute phase of the disease into presumably susceptible persons. Some of his subjects underwent typical attacks of measles. His results offer the first direct indication that a transmissible agent might be present in the circulating blood during the early phase of the clinical disease. Home's experiment was repeated by others during the 19th century, sometimes with confirmatory and sometimes with contrary results in respect to the production of measles. Since in all these attempts, including Home's, adequate precautions were not taken to rule out the possibility of spontaneous infection, the development of measles following inoculation could not be regarded as conclusive evidence for the transmission of a specific infectious agent.

The modern era of measles research began in the early nineteen hundreds with experiments of the same sort in human beings, but they were carried out under more rigidly controlled circumstances. Again the results were at variance. Nevertheless, several workers apparently succeeded in transmitting the infection from person to person with blood taken during the acute phase of the illness. The most convincing of these positive transmission experiments were those reported by Hektoen in 1905. Hektoen's results were in addition of much importance, since he was unable to demonstrate bacteria or other micro-organisms in the inoculum. This absence of visible organisms, of course, strongly suggested that the responsible agent was a virus.

Taken as a whole the data obtained from transmission experiments in man, carried out between 1905 and about 1930, left little doubt that an infectious non-bacterial agent present in the blood during the early stages of measles represents the etiologic agent.

During this same period numerous investigators were seeking for a susceptible experimental animal.

With the exception of certain kinds of monkeys, none of those tested proved to be clearly susceptible to the virus, although a few workers claimed to produce infection in rabbits, guinea pigs, mice and other small species with materials from measles patients. Even in monkeys the response to inoculation of blood or throat secretions was extremely variable. For example, Anderson and Goldberger noted signs resembling measles in 50 percent of *Macacus* monkeys, whereas others working with the same species, recorded reactions of this sort in only 10 percent of their animals. I wish to emphasize this striking variation in resistance of individual monkeys and of different lots of monkeys that was almost universally encountered by our predecessors and by ourselves in our earliest experiments with measles, because, as I shall subsequently show, we now have a reasonably clear explanation for it.

In monkeys that responded to inoculation the manifestations most frequently noted were an exanthem of varying intensity and distribution, an exanthem which sometimes resembled Koplik's spots, leucopenia, and a rise in body temperature. These effects were usually seen during the second week following inoculation, and they were observed in some cases after injection of filtered inocula and upon subinoculation of blood from monkey to monkey.

In brief, then, the results in monkeys parallel those obtained in the human experiments. But it is obvious that this widely varying response of monkeys to infection greatly limited their usefulness as experimental animals.

The failure to find a completely satisfactory host among the various species examined led to intensive investigation of the chick embryo as a medium for the propagation of the measles virus after Woodruff and Goodpasture in 1931 had demonstrated that other agents could be readily cultivated under these conditions. Employing this technique, a number of authors reported successful results. Most noteworthy are the observations of Rake, Shaffer, Stokes and their associates who described the cultivation of measles virus throughout many serial passages in chick embryos. They failed, however, to note any effect of the virus on the embryo or its membranes. In consequence of this lack of pathogenicity they were forced to inoculate monkeys with infected egg materials in order to demonstrate the presence of the agent.

These same investigators subsequently injected children with virus that had been passed several times in the chick embryo in order to determine whether its virulence had been diminished by this prolonged residence in an unnatural host, and if so, whether it would retain its immunizing properties. In a few of the children signs of a modified

measles were seen, although in the majority no illness developed. In the earlier of several trials, the egg-grown virus appeared to be an effective immunizing agent, but in the last and largest trial the results were inconclusive.

At about this time, i.e., in 1939, Plotz in Paris described the serial propagation of measles virus in cultures of chick embryo tissue and his observations were confirmed shortly afterwards by Rake and his co-workers. But during this same period we were unable to obtain convincing evidence that measles virus derived directly from patients was capable of multiplying in chick embryos or chick embryo tissue cultures. Indeed, in a series of experiments recently carried out in our laboratory in which we employed the new and more reliable methods for detecting and measuring the activity of the virus that I shall immediately describe, we have consistently failed to find any evidence that freshly isolated strains of the virus multiply in chick embryos. After prolonged cultivation in cells of human origin we, however, succeeded in adapting one strain to chick embryos or chick embryo tissue cultures. The explanation of this discrepancy between the findings of Rake and his associates and Plotz and our own observations is not yet at hand. Perhaps it will come as a result of future experimentation.

The principal facts, then, concerning the agent of measles that had been established by 1953, when after an interval of 15 years, we resumed its study, can be recapitulated as follows:

- (a) The agent is filterable.
- (b) It is present in the blood and pharynx of patients in the eruptive and pre-eruptive stage.
- (c) It produces a disease resembling mild measles in man in a widely varying proportion of several species of monkeys.
- (d) Its infectivity for other common laboratory animals with the possible exception of the chick embryo had not been established.

To us it appeared unlikely that knowledge of nature and properties of this virus could be extended much further unless simple, reliable and inexpensive methods were devised for its isolation from infected patients or animals, for the measurement of its infectivity and for the detection and assay of antibodies reacting specifically with it.

Accordingly, Dr. Peebles and I proceeded to explore the possibilities of the tissue culture techniques for the cultivation of the measles virus that had proved successful in the case of polio virus and which I described here in the 1953 Griswold Lecture.

MULTIPLICATION AND CYTOPATHOGENIC EFFECTS OF THE VIRUS IN CELL CULTURES

We began by adding small amounts of blood or throat washings from patients with typical early measles to cultures of human renal cells. In some of the cultures that had been exposed to the materials from the patients with measles changes in the regular pattern of the cell monolayer were noted after the lapse of several days. These changes were evident in focal areas in which the cell boundaries had become obliterated with the resulting formation of syncytia-like masses or multinuclear giant cells in which large and small vacuoles were often distributed throughout the cytoplasm. On staining, eosinophilic inclusion bodies were conspicuous within most of the nuclei of the affected areas. In the cytoplasm irregularly shaped masses of varying size also were frequently seen. These stained intensely with eosin and were surrounded by a clear zone or halo.

The striking cytopathogenic effects of the virus we had isolated contrasted sharply with those produced by many agents such as polio, ECHO and Coxsackie viruses. Thus they provided easily recognizable criteria by which the measles virus could be tentatively identified.

These changes have been reproduced in each of over 30 serial passages in human renal cells of the strain which we first recovered and have also occurred regularly in cultures infected with each of 10 other strains that we have isolated from typical cases of measles. Subsequently we found that the virus produces the same effects in cultures of human amnion and monkey renal cells. Other workers have since described giant cell formation in cultures of human cancer cells infected with this agent as well as in those consisting of cells from lower animals such as the guinea pig, hamster, mouse and dog.

When we undertook to study the virus in cultures of human amnion cells we noted another and very different sort of cytopathogenic effect. This consisted in the transformation of the predominating polygonal epithelial cell into a fibroblast-like form. We have referred to this as "spindle-cell transformation." At times it is the only effect observed. As yet we have not solved the mystery of these contrasting effects. Until disproved by further experimentation, we may conjecture that two variant forms of the virus are present in our virus suspensions, one of which may be responsible for the giant cells and the other for the spindle cell conversion.

With the definition of these characteristic cytopathic changes in tissue culture, a relatively simple and dependable method immediately became available for the isolation of the virus, for its unlimited

propagation in the laboratory and for the quantitative determination of its infectivity. Thus, to assay viral infectivity one need only prepare a series of dilutions of the infected material, add a measured quantity of each of these dilutions to several cell cultures and note the highest dilution that induces cytopathic changes. The number of infectious units per unit volume of the original material can then be readily calculated. A convenient procedure for the determination of infectivity, of course, is not only essential in tests for specific viral neutralizing antibodies, but is indispensable in the analysis of almost every problem that confronts the virologist today.

When we had demonstrated to our satisfaction that these cytopathic effects were caused by a filterable agent, it became necessary to obtain additional evidence before its identity with the virus responsible for measles could be established, since to judge an individual because of association is as unsound with a virus as it is with a man.

Data that we consider adequate to justify this conclusion were eventually obtained in three different ways. First by tests for the development of specific virus neutralizing and complement fixing antibodies in the blood of measles patients; second, by inoculation of monkeys with the virus after it had been maintained in tissue culture for varying periods; third, by inoculation of human subjects with a strain of attenuated virulence.

DEMONSTRATION OF VIRUS-NEUTRALIZING AND COMPLEMENT FIXING ANTIBODIES

Tests for the development of virus neutralizing antibody, i.e., antibodies inhibiting the cytopathogenic effects of the virus, were carried out by mixing 100 infectious units of virus with increasing dilutions of acute and convalescent phase sera taken from the patients from whom the virus was recovered, as well as from other cases of measles. The mixtures of serum and virus were then added to a series of human renal or amnion cell cultures and the presence or absence of cytopathic effect recorded after a period of 2 weeks. In this way we soon found that neutralizing antibody appeared within a few days after the rash—sometimes within less than 48 hours and attained high concentrations in the blood one to two weeks thereafter.

Ruckle and Rogers have confirmed and extended these observations. They found that this antibody may appear as early as 30 hours after the rash and be still demonstrable at the end of 11 months. It is probable that the neutralizing antibody persists indefinitely in the blood since we have detected it in the sera of several adults who had measles in childhood. The high concentrations of virus neutralizing antibody found by ourselves and by

Ruckle in several specimens of human gamma globulin which is prepared from adult plasma also testify to its persistence over the years.

As in most other viral infections of man it has been possible to demonstrate the emergence of complement fixing antibodies following an attack of measles. Early in our studies we found that the fluid from cultures of human and monkey cells infected with the virus contained an antigen that specifically fixed complement in the presence of convalescent measles serum. Since this procedure can be carried out more rapidly and a larger number of serum specimens examined with less labor, we have employed it more frequently than the *in vitro* neutralization test.

The results of complement fixation tests on acute and convalescent phase sera with antigens produced in tissue cultures again indicated that antibodies specific for the agents we had recovered appear at about the same time as the neutralizing antibodies. These antibodies also tend to persist for long periods as shown by follow-up tests on measles patients and by a high correlation of a positive complement fixation test with a history of measles as determined in studies by Ruckle and ourselves on groups of children and adults with and without histories of the disease. Taken as a whole, these findings strongly supported the hypothesis that the agents we had recovered represented individual isolates or strains, as the virologist calls them, of the viral species which is responsible for measles. In addition, they indicated that the neutralization and complement fixation tests could be used to distinguish susceptible individuals from those who had undergone a previous infection and as a result were presumably immune. Applied in this way, these serological techniques have proved indispensable in the experiments on the effects of inoculating the virus into monkeys and man which I shall now describe.

EFFECTS IN SUSCEPTIBLE MONKEYS FOLLOWING INOCULATION OF VIRUS CULTIVATED IN HUMAN CELL CULTURES

If the cultivated virus was in fact the etiologic agent of measles, typical signs of the disease should follow its inoculation into susceptible monkeys. But the variability of the response of these animals to infection, which I have already stressed, appeared to offer an obstacle to the easy performance of this experiment. Long ago we had considered the possibility that the natural resistance of certain monkeys might be due to previous spontaneous infection with the measles virus or one closely related to it. Since we were now armed with the means of obtaining evidence of past infections of this sort we collected serum specimens from 24 apparently normal rhesus and cynomolgus monkeys

and tested them for complement fixing antibody. The tests were positive in all but two instances, suggesting that the majority had earlier experienced an infection with the virus. Indeed, the antibody titers of some of the sera exceeded 1:1000—a very high level indeed. Here at last we seemed to have an explanation for the variation in resistance of these animals. But we were now confronted with the practical problem of how to obtain monkeys without antibodies for our virus which presumably would be susceptible to experimental inoculation. It then occurred to us that the animals in which antibodies were detected might have become infected after they were captured and brought to this country, since all of those we had examined had previously been confined in three different American laboratories for considerable periods of time. Accordingly a group of twelve cynomolgus monkeys were procured with the aid of the U. S. Army Medical Department and the National Foundation and shipped by air to this country within a few days after they were taken in the Philippine forests. Complement fixation tests were done on their sera immediately after their arrival at the laboratory. No antibodies were found. To date we have examined the sera of over 50 individuals of this species which have been sent to us under these conditions. In none has antibody been detected.

Thus provided with susceptible animals we followed the reactions of eight cynomolgus monkeys after they were inoculated with virus that had been maintained in cultures of human kidney cells throughout a varying number of serial passages. With a single exception the virus was introduced into the monkeys by both the intravenous and intranasal routes. The agent was recovered by the tissue culture method from the blood of all but one of the animals. Viremia began five to seven days after inoculation and persisted from two to seven days. In four monkeys an exanthem extending over the thorax and abdomen was observed on the ninth or tenth day, which persisted for three or four days. Leucopenia of slight or moderate degree was present from about the seventh to the eleventh day. No enanthem was seen and the moderate fluctuations in body temperature recorded were not regarded as significant.

In every animal complement fixing and neutralizing antibodies appeared in the blood within a period of two to three weeks.

From these findings we concluded that in susceptible cynomolgus monkeys the cultured virus was capable of inducing a disease resembling measles in man. The simian infection, however, is milder and, in our experiments at least, is not accompanied by Koplik's spots or conjunctivitis. Its

most constant features are prompt formation of antibodies and the development of viremia.

ATTENUATION OF VIRULENCE AFTER PROLONGED CULTIVATION IN TISSUE CULTURE

In order to complete the chain of evidence for the identification of our virus with the measles agent, it would theoretically be desirable to reproduce the disease by inoculation of human subjects. For obvious reasons we did not wish to attempt this while the virus was in a state in which it was still capable of giving rise in monkeys to viremia and other manifestations of unmodified disease. Eventually, however, we were able to determine its effect in man when, after many passages in cultures of human cells followed by others in the chick embryo and chick embryo tissue culture, the virulence for monkeys of one strain was found to have become markedly reduced.

I shall digress somewhat at this point in order to make clear how we became aware of this alteration in virulence. I must confess that it was in a very round-about way which began with attempts to repeat the experiments of Rake and Shaffer on the cultivation of the agent in chick embryos that I have already mentioned. Employing five different strains of virus which had been passed serially from two to seven times in human kidney cell cultures, we failed completely to demonstrate multiplication in this host. Likewise in cultures of chick embryo cells prepared according to the procedure employed by Plotz we had observed no proliferation of virus derived from early passages in human cell cultures. In spite of these negative results, another attempt was made with Milovanovic and Katz to propagate the virus in the chick embryo. On this occasion, however, one of the viruses designated the Edmonston strain, was selected, which had previously been carried through a total of 52 passages in human kidney and amnion cells. Although it had failed to infect chick embryo shortly after it was isolated, when now it was introduced into the amniotic sac of the chick embryo it multiplied readily. After six passages in this host the virus was found to proliferate actively in chick embryo cell cultures. In this medium it produced at first no cytopathic changes, but later acquired the capacity to initiate the formation of small giant and spindle cells.

These changes in the infective potential of the Edmonston strain for chick tissue suggested that its virulence for the monkey might likewise have been altered. Following up this idea, four susceptible cynomolgus monkeys were given the Edmonston virus from the fourteenth chick cell tissue culture passage by both intravenous and intranasal routes. Blood specimens taken every other day

were examined for the presence of virus and the sera were tested for complement fixing antibodies. None of these animals developed a detectable viremia, nor any other signs of infection with the exception of slight leucopenia. Antibodies appeared on the thirteenth day after inoculation and rapidly attained levels comparable to those seen in monkeys recovering from infection with the virulent early-passage virus and to those found in the sera of convalescent patients. In two of these animals that have now been followed for one year and eight months the antibodies have persisted at moderate to high levels.

Another group of eight monkeys was inoculated subcutaneously with portions of the same virus material. Again no overt signs of infection were noted. Viremia was absent and the antibody response as measured both by complement fixation and virus neutralization tests was pronounced. After an interval of seven months the resistance of these eight monkeys was challenged by the intravenous and intranasal administration of virulent virus. None of the monkeys that had previously received the agent developed any signs of illness and virus was not recovered from their blood. Of much interest, however, was the finding that the challenge virus introduced intranasally persisted for several days in the throats of each of these otherwise immune animals. This demonstration of the capacity of the virus to establish a localized infection in the face of generalized systemic resistance would seem to offer some support for the hypothesis, long entertained, that the durable immunity characteristic of measles and certain other viral diseases depends upon occasional silent re-infections. By means of the tissue culture technique the validity of this hypothesis may now be readily explored.

Additional experiments that I shall not review here in detail showed that when injected subcutaneously the virus did not appear subsequently in the nasopharyngeal secretions. Furthermore it was determined that this attenuated virus when introduced into the brain of susceptible monkeys gave rise to no clinical symptoms or recognizable histological changes in the tissues. That it failed to multiply at all in the central nervous system was suggested by repeated failures to demonstrate its presence in the spinal fluid. In contrast the agent in its virulent state was able to cause an inapparent infection of the nervous system, since it was recovered from specimens of the spinal fluid over a period of seven days after inoculation into the brain of a susceptible animal.

From these observations in monkeys which I have described here in a very fragmentary way, we drew the conclusion that prolonged passage in human

and chick cells had brought about a marked reduction in the virulence of the Edmonston strain.

RESPONSE OF HUMAN BEINGS TO INOCULATION OF THE ATTENUATED VIRUS

Having come to this conclusion we now considered that it would be justifiable to proceed with a trial of the effect of the attenuated virus in man. A trial of this sort has been recently carried out by Dr. Samuel Katz and myself in the following manner.

The virus was grown in chick embryo cells nourished with a synthetic medium which contained no foreign proteins. After the usual safety tests were shown to be negative and intracerebral inoculation of monkeys had resulted in no injurious effects, the virus suspension in amounts ranging from 0.1 to 0.5 ml was injected subcutaneously into eight adult volunteers, all of whom gave a history of measles. Specific complement fixing antibodies were also demonstrated in the blood of these presumptively immune individuals prior to inoculation. No reaction of any sort was subsequently observed in these subjects.

A small group of susceptible children was then selected on the basis of negative history for measles and absence of complement fixing and virus-neutralizing antibodies. With the consent of their parents and guardians, some of the children in this group were given the attenuated virus subcutaneously. Others received sterile culture medium and were allowed to remain in intimate association with those inoculated with the virus in order to determine whether or not contact infection might occur.

In most of the children who received the attenuated virus, elevation of temperature ranging from 101-103° F occurred six to nine days and a macular rash on the tenth to the twelfth day after injection. The eruption was discrete and resembled that seen in measles modified by prior injection of gamma globulin. In one individual only Koplik's spots were noted on the twelfth day. None of the children appeared to be ill, and all of them continued to follow their normal activity. Virus was not recovered from the blood or pharyngeal secretions of any of them. Complement fixing and neutralizing antibodies developed in each individual between the fifteenth and twenty-second days in concentrations comparable to those found in convalescence from the natural disease. The children who were given sterile culture medium exhibited no symptoms suggestive of measles and neither virus nor antibody were subsequently found in their blood.

The data obtained in this trial would seem to complete the evidence for the identity of the virus propagated in tissue culture as the agent causing measles. For, although the manifestations of infec-

tion were far less severe than those distinguishing the natural disease, they were sufficiently alike, in our opinion, to establish identity.

The findings are also of interest from several other points of view. Thus they support the conclusions drawn from the monkey experiments that the virulence of the virus had been diminished. They make it equally clear, however, that the degree of attenuation for man is less than that for the monkey. In addition, these results indicate that persons receiving the virus subcutaneously do not

become sources of infection for susceptible contacts. Finally, although its virulence is reduced, the virus appears to retain unimpaired its capacity to stimulate the formation of specific antibodies.

It remains for future experiments to determine whether further attenuation of virulence with retention of antigenicity can be achieved. If this proves to be possible, it would seem likely that a practical and effective procedure for inducing active immunity against measles may become available.

Need For Polio Vaccination

A majority of the population of the United States, 98,000,000 persons, has not received a single injection of Salk vaccine, according to The National Foundation. A typical situation exists in the District of Columbia "and may be responsible for unnecessary recurrence of polio. . . ."

The annual average of polio cases reported in 1950-1954—before the vaccine was introduced—was 39,000. It was below 6,000 at the end of 1957, some three years after the Salk vaccine went into use, says Dr. John R. Pate. But in 1958 reported cases went above the 6,000 mark.

In 1958, paralytic cases, occurring chiefly in children under five years of age, jumped to 44 per cent above the number reported in 1957. The second highest incidence was in children five to nine.

The recent increase of paralytic polio chiefly occurred among the unvaccinated. However, "it may be difficult to determine just how much of the decline in cases since 1955 is due to immunization."

The younger age groups face the greater risk of paralytic polio. Nevertheless, Washington experience shows that "many thousands in all age groups have not yet received any vaccine"—and the older groups of course also require protection.

For the first time in four years, the summer of 1958 showed an increase in paralytic polio. To prevent repetition of a rising incidence of paralytic polio, it is necessary to intensify all efforts to convince people to receive the Salk vaccine. "The danger we face today—neglecting the possibility of conquering a preventable disease—is unthinkable in a well-informed society." (*Medical Annals of the District of Columbia* 28:342, June 1959.)

The Effect Of Hypothermia On Digitalis Intoxication*

L. H. NAHUM, M.D. AND R. PHILLIPS, M.D.

New Haven

WHEN hypothermia is induced by blood cooling, the heart and circulation are singularly free of serious alterations except at very low temperatures usually below 20° C. The heart is not irritable, few if any ectopic beats are encountered, ventricular fibrillation is seldom seen. The electrocardiogram in general shows only minimal changes. The coronary circulation remains adequate for the heart's metabolic needs.¹⁻⁶ This method of inducing hypothermia is not in common use especially on human subjects, largely because of the technical problems involved such as the need to sacrifice large arteries and veins and the need to prevent blood clotting by use of heparin. For these reasons, surface cooling usually by immersion in an ice bath is the method of choice both clinically and experimentally. With this method, however, there develop striking electrocardiographic changes in the ventricular complex and also myocardial irritability manifested by the occurrence of ventricular ectopic beats and ventricular fibrillation at temperatures between 29° and 25° C.⁷⁻¹⁰ Surgeons warn against working on the heart at temperatures below 29-27° C. for fear of producing ventricular fibrillation. There is evidence to suggest that in hypothermia induced by immersion in ice water the heart is not at the same temperature throughout, but rather that some areas especially in the precordium are cooler than the remaining myocardium and that there exist gradients of repolarization and depolarization between these regions which tend to produce the dangerous arrhythmias encountered during hypothermia. Some of the significant changes in the electrocardiogram are prolongation of the terminal part of the QRS complex and slowing of repolarization as evidenced by lengthening of QT.¹¹ Anything that might act to shorten the QT might conceivably be useful in prevention of the arrhythmias. It is known that digitalis in toxic doses causes marked shortening of the duration of the action potential of the individual heart fibre and also shortening of QT in the intact heart.¹² It seemed therefore desirable to study the effect of digitalis on the hypothermic heart. If digitalis could act to shorten the QT of a hypothermic heart

it might act favorably to prevent arrhythmias produced by hypothermia and, vice versa, hypothermia might favorably affect the toxic rhythms induced by digitalis.

There are many suggestions already in the literature that digitalis is protective to a heart at hypothermic temperatures. Of nine patients undergoing hypothermia for heart surgery, Kossman described one who was digitalized and did not develop the expected prolongation of the QT interval.¹³ Woodruff overcame the hypotension in dogs during hypothermia by injecting digitaline.¹⁴ Elliott et al¹⁵ found that digitalized rats survived much lower temperatures than their controls. Lombardo et al¹⁶ cooled dogs to 28° C. then performed various surgical procedures on the heart including occlusion of the vena cavae and the azygous veins and found a higher survival rate with less ventricular fibrillation in the group that had first been digitalized with strophanthidin. A similar experience has been reported by Angelakos et al with ouabain.¹⁷ Cookson et al used digitalis and thiamin preoperatively in dogs at 26° C. during vena cavae occlusion for 15-20 minutes and only one of eleven developed ventricular fibrillation.¹⁸ Talbot⁸ protected patients at 80° F. against ventricular fibrillation by administering digitalis. Electrocardiographic studies on patients or animals who received digitalis are scarce and the use of hypothermia as a technique in dealing with serious cardiac arrhythmias has not been reported. Accordingly, the following experiments were undertaken to study the effect of digitalis on the hypothermic electrocardiogram and of hypothermia in digitalis intoxication.

METHOD

Eight normal dogs were cooled to 29.5°-27.5° C. by immersion in an ice bath after being anesthetized with intravenous injection of nembutal, 58 mg. per Kg. body weight. Each of these animals then received 0.85 mg. per Kg. of cedilanid i.v.† Electrocardiograms were recorded at frequent intervals after cedilanid was administered. Two animals were digitalized first with cedilanid and then rendered hypothermic. Two other animals were digitalized with a dose of cedilanid 0.14 mg. per Kg. to produce A.V. dissociation and then rendered hypothermic. Standard limb, V limb leads

*From the Department of Physiology, Yale University School of Medicine, New Haven, Conn.

†Generously supplied by Sandoz Company.

were recorded employing subcutaneous needle electrodes. V right and left precordial leads were recorded by inserting the exploring needle electrode subcutaneously at the point of maximum impulse over the right and left ventricles. A Sanborn twin-viso cardiette was used at a speed of 50 mm/sec. Standardization was at 1.0 cm/m.v.

RESULTS

A—Effect of cedilanid on the hypothermic electrocardiogram.

In doses of .085 mg. per kg. administered i-v the hypothermic ventricular complex revealed strikingly little change 1/2 to 1 hour after administration, although in a normal dog such a time interval is sufficient to produce typical digitalis effects. The heart rate was not altered and the QRS, ST and T waves retained the hypothermic pattern. These hypothermic animals were then given an additional dose of cedilanid i-v bringing the total amount to

0.12 mg. per Kilo. Within another hour, the animal temperature remaining the same, the QRS and QT significantly shortened, the ST segment returned to the base line and the T waves turned positive (Fig. 1).

B—Effect of hypothermia on the digitalized heart.

When cedilanid was administered to dogs in doses of .085 mg. per kg. the electrocardiographic changes in some respects were similar to those produced by hypothermia. T amplitude declined or became inverted. St segments in the precordial leads were displaced downwards; occasionally P-R lengthened but QT did not change as it does in hypothermia. Subjecting such animals to hypothermia produced a typical hypothermic electrocardiographic pattern in which the digitalis pattern was not recognizable. However, if the animals had previously received enough cedilanid to produce interference and dissociation usually 0.12 to 0.14 mg. per kg. then it required but a drop of 2.4° C. from the normothermic temperature to abolish the dissociation. Regular sinus rhythm then persisted until the animals were rewarmed to within 2-4° of normothermic levels at which point the dissociation reappeared (Fig. 2).

DISCUSSION

The experiments reveal that moderate doses of cedilanid which are sufficient to alter the ventricular complex of the normal dog do not affect the hypothermic electrocardiogram. However, when the amount of cedilanid administered was significantly increased it tended to abolish the hypothermic pattern. The explanation for this observation could be at least in part due to the effect of cedilanid and hypothermia on the refractory period. Hypothermia lengthened the refractory period significantly whereas moderate doses of cedilanid did not shorten it. It would be expected therefore that in such cases the duration of the refractory period would be the result of hypothermia alone. However, it is known that large doses of cedilanid shorten the refractory period.¹² If this effect could be sufficient to overcome the prolongation caused by hypothermia, then the reversal of the hypothermic electrocardiographic pattern achieved in these experiments could be explained on this basis alone.

However, the action of cedilanid on the hypothermic heart is not limited to its effect on the refractory period alone. There appears to be an influence upon conduction and probably also on the metabolic behavior of the myocardial cell. A part of the change in the hypothermic pattern caused by cedilanid is the improvement in the conduction of the excitation process to the overcooled regions in the anterior cardiac surface, since the QRS interval in hypothermia was 0.160 sec. while

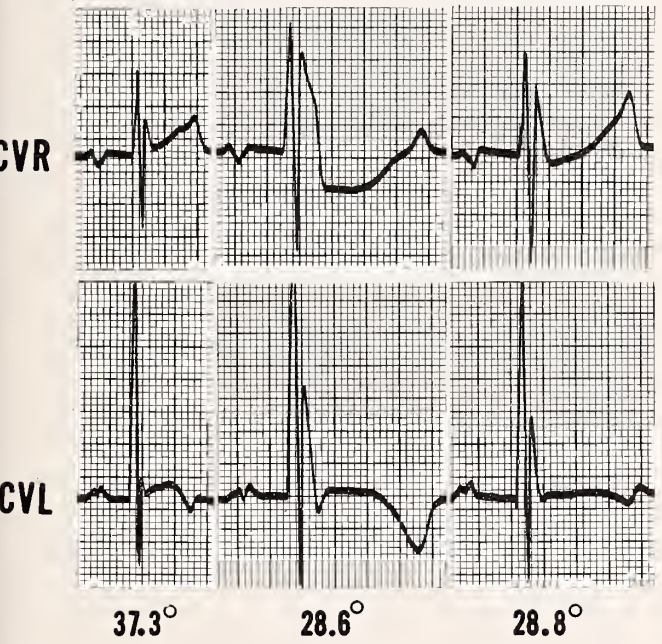


FIGURE I
CHANGES IN THE RIGHT AND LEFT PRECORDIAL LEADS (CVR AND CVL) OF DOGS AT LOW TEMPERATURES AFTER ADMINISTRATION OF CEDILANID

Precordial leads were obtained over the right and left ventricular apices (CVR and CVL). Control records at 37.3° C. are shown. The second pair of records at 28.6° C. shows a marked ST segment depression in CVR and deep T wave inversion in CVL with an isoelectric ST segment. The QT and QRS intervals are prolonged. The deflection, R', is prominent. The third pair of records was obtained 65 minutes after intravenous administration of 1.2 mg. Cedilanid. The ST segment and T wave have returned to a more normal position, QT and QRS intervals are shortened, and the tall R' in CVR of the second pair is much less prominent. This latter alteration probably represents improved conduction in the ventricles caused by Cedilanid. Dog #32, Wgt.: 9.0 Kg., 10/15/56

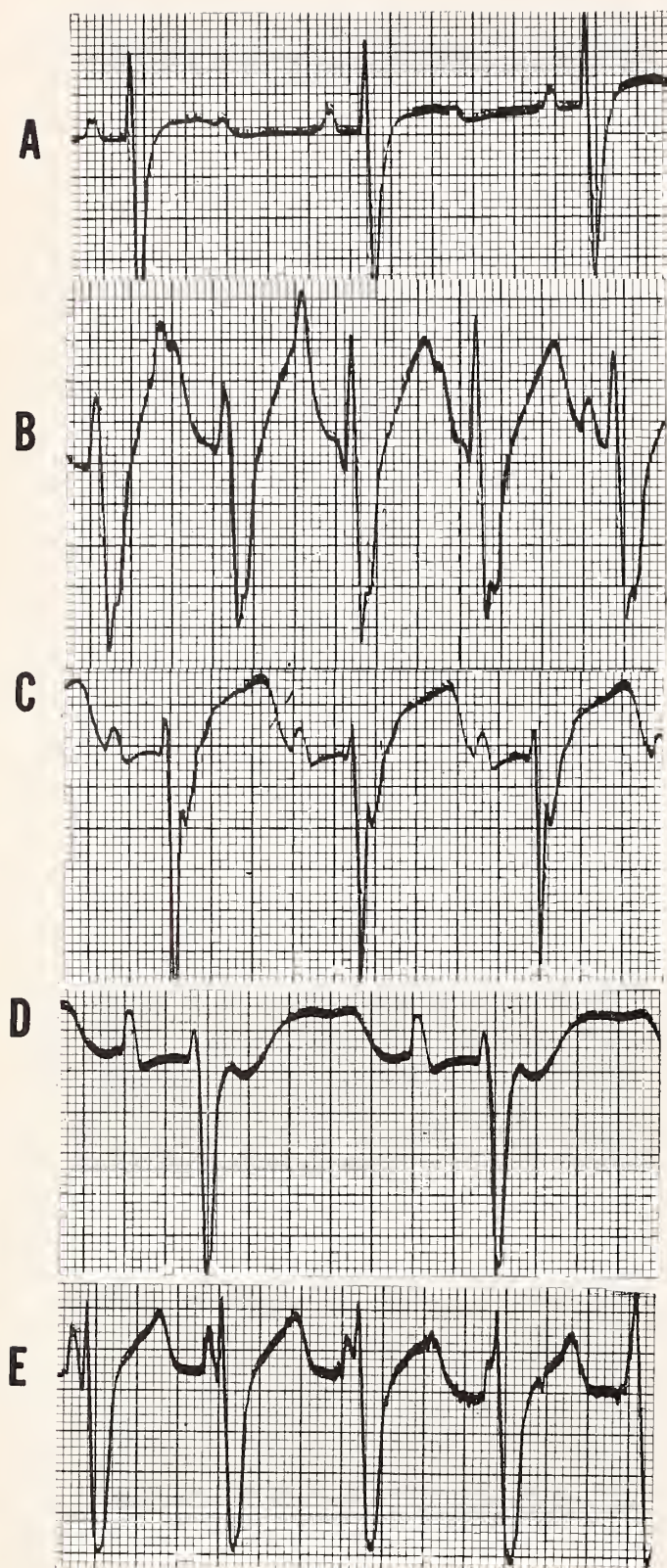


FIGURE II

INTERFERENCE AND DISSOCIATION AFTER CEDILANID ADMINISTRATION AND ITS DISAPPEARANCE DURING HYPOTHERMIA LEAD II

A. Normal sinus rhythm at 34.5°C . B. interference and dissociation 15 minutes after the intravenous administration of 1.2 mg. of Cedilanid. C. Reestablishment of normal sinus rhythm after 15 minutes when the body temperature was depressed to 32.5°C . by immersing the animal in ice water. D. Normal sinus rhythm persists during a further fall in body temperature to 26.6°C . E. Return of interference dissociation when the animal is rewarmed to 35.7°C . Dog #10, Wgt.: 9.7 Kg., 12/21/56.

after cedilanid it was shortened to 0.090 sec., the greatest effect taking place in the duration of R'. In normothermic hearts cardiac glycosides do not change conduction velocity unless amounts are used that exceed 60 per cent of the lethal dose,¹⁹ a much higher dose than was employed in these experiments. It would appear that in hypothermia smaller amounts of cedilanid were able to improve conduction. This suggests that cold produces a metabolic defect which is overcome by the cardiac glycoside.

Support for the existence of a metabolic defect caused by cold is derived from other observations. The hypothermic electrocardiographic pattern which results from surface cooling is probably the result of general cooling of the whole heart by blood cooled in the skin, together with a direct transfer of cold to the anterior heart surface, so that gradients of repolarization are set up between the heart and its anterior surface. It is this which seems to account for the electrocardiogram obtained in body surface cooling as compared to that occurring when hypothermia is produced by blood cooling.¹¹ The restoration of the normal electrocardiographic pattern by cedilanid implies that the gradients of repolarization have been abolished. If the action of cedilanid was an effect on the refractory period then, the refractory period of the overcooled region is obviously relatively more shortened than that of the remaining myocardium, otherwise the whole complex would be shortened but the pattern would not change. If, however, a metabolic defect is produced by cold then the restoration of the electrocardiographic pattern could be explained if cedilanid acted to overcome this metabolic abnormality thereby restoring the recovery of the ventricles as a whole. Support for the view that a metabolic defect occurs at low temperature is found from the work of Berman et al.²⁰ At 27°C . ouabain was found to increase the force of contraction of isolated rat ventricle strips when glucose was added to the medium. In other words the hypothermic heart is hypodynamic and this state is overcome by ouabain in the presence of glucose.

If cedilanid furnishes additional energy to the hypothermic heart thereby improving repolarization and facilitating conduction, then its employment, or any other cardiac glycoside would appear to be desirable in all cases undergoing hypothermia. However, these experiments suggest that a larger dose of digitalis than is usually required might be necessary since the "physiological" dose first employed failed to reverse the hypothermic pattern.

Of especial interest in the management of toxic rhythms induced by excessive amounts of cedilanid

are the observations that a reduction of temperature to 32° C. was sufficient to abolish interference and dissociation caused by this glycoside. This antagonism between cedilanid and hypothermia also observed by Angelakos et al¹⁷ is probably not caused by an increase in the potassium content of the myocardial cell resulting from hypothermia. It is of course known that digitalis glycosides induce a loss of potassium from the myocardial fibers while increased intra-cellular concentrations of potassium result in decreased digitalis toxicity. However, the drop in temperature required to abolish the digitalis arrhythmia is relatively small and even temperatures as low as 26-24° do not lead to significant changes in the intracellular content of potassium as determined by direct a-v electrolyte differences.²¹

In order to abolish interference and dissociation it is necessary to reduce the rate of the ventricles enough so that supraventricular control of the ventricle can be restored. This can be accomplished either by speeding up the sinus or by slowing down the ventricular focus. It is this latter mechanism which occurred in these experiments. It is clear that lowering the temperature has a greater effect upon the rhythmicity of the ventricle than upon either the atrium or the sinus for if its effect were uniform throughout the conduction system, the interference and dissociation would still persist though at a slower rate. Just as the ventricular rhythmicity was reduced by cold more than that of the atria, so atrial rhythmicity is probably more responsive to the action of cold than is the sinus. Kossman¹³ observed that hypothermia abolished atrial fibrillation and restored regular sinus rhythm. Regardless of whatever mechanism is accepted as the cause of atrial fibrillation, in this arrhythmia the atria are beating much faster than the sinus. Even when all propagated electrical activity and contraction of the atria had ceased at low temperatures, Marshall²² found that pace-maker fibers still continued to discharge. Hypothermia therefore exercises a suppressive effect on rhythmicity of the conduction systems in reverse, exhibiting the greatest effect on the ventricles and the least upon the sinus node.

The arrhythmias of digitalis intoxication encountered in the clinic are usually well controlled by intravenous potassium or quinidine or other anti-arrhythmic drugs. However, when these prove ineffective it is well to consider that it may be possible to abolish the arrhythmia by lowering the body temperature to 32°. Whether or not any other type of ventricular tachycardia would respond to hypothermia remains to be determined. The above experiments however suggest such a possibility and warrant a trial in the desperate case which proves refractory to other types of therapy.

SUMMARY

1. Intravenous cedilanid in "physiologic" doses did not alter the hypothermic electrocardiogram of the dog.
2. Doses of 0.12-0.14 mg/kg. tended to restore the hypothermic electrocardiogram towards normal.
3. Interference and dissociation produced by large doses of cedilanid gave way to regular sinus rhythm at 32° C. but reappeared on re-warming the animal.
4. The suppressive effect of hypothermia on impulse formation in the ventricles suggests its use in intractable ventricular tachycardia.
5. The reversal of the hypothermic electrocardiographic pattern by cedilanid should encourage surgeons to digitalize all patients undergoing hypothermia.

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Sickness From Symbols

Symbolic stimuli are "those that derive their force not from their intrinsic qualities but from their significance to the individual system"; they must be studied as clues to the explanation of conditions that can not be accounted for by physical factors alone.

"Voodoo death" or sudden death unexplained by organic influences eludes easy description. Symbolic stimuli have demonstrated their impact on the cardiovascular system; sudden deaths in these circumstances are "perhaps attributable to massive autonomic discharge," which very likely "is principally a parasympathetic one so that vagal stimulation is the important factor." For example, "fainting among soldiers who are about to undergo venipuncture is accompanied by bradycardia, indicative of the vagal pattern."

It is likely that many persons have a powerful, unconscious fear of having their skin pierced. One study showed that in 85 per cent of persons suddenly dying of snake bite the amount of poison was not enough to explain the deaths. It is known that deaths have occurred following bites by nonpoisonous snakes.

Then there are the "as if" responses, represented by such phenomena as salivation at thought of a delicious meal or "lacrimation when one sees a cinder in the eye of another person." When exercising, a person seems to encounter a lipid-mobilizing factor that increases the serum cholesterol level. In some persons, perhaps "a similar lipid-mobilizing mechanism derives from emotional stimuli 'as if' great muscular effort were required." There may be persons with coronary artery disease who are especially susceptible to the "as if" lipid-mobilizing response.

"There would seem to be a need in modern culture to find means for changing the significance that symbols have for some people." (*GP* 19:79, March, 1959.)

Peripheral Arteriography Utilizing Image Amplification And Cineroentgenography

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NUMEROUS devices and methods have been proposed and utilized for the roentgenographic visualization of the femoral and popliteal arteries. Many of the arteriographic procedures have proved to be time-consuming, complicated and often unsatisfactory. A major difficulty in obtaining adequate roentgenograms has been the inability to obtain serial films which could demonstrate the proximal vasculature, the site of the block, and the collateral circulation. The stimulus of the renewed surgical interest in the treatment of arteriosclerotic disease and the improvement in surgical techniques has served to emphasize the need for adequate roentgenographic visualization of the peripheral vasculature. Since the technical potentialities of the image amplification cineroentgenographic apparatus appeared unusually adapted for arteriography, it was decided to investigate this facility. The procedure devised using this apparatus forms the basis for this report.

The use of cineroentgenographic technique for the visualization of the components of the cardiovascular system has been completed by various investigators. The progress using these methods has extended to the delineation of the vascular supply of every known anatomic area and organ. Gidlund⁵ as early as 1949 proposed the use of direct cine methods for peripheral arteriography, but he did not elaborate on the technique utilized. The use of direct cineroentgenography required high radiation exposure levels. The radiation levels when electronic image amplification is used in the recent devised systems of indirect cineroentgenography are significantly reduced. Moreover, with the recent introduction of large field size tubes utilizing image amplification, larger anatomic areas can be surveyed and recorded on film. The improved designs of the apparatus makes it possible for the visualization of various vessels, occlusion sites and collateral channels.

The procedure described here utilizes the concept of image amplification whereby the image is re-

corded on the fluoroscopic screen or film and is intensified 750 to 1,000 times in brightness by electronic means.

Morgan⁸ has stated that the electron optical intensifier systems increase the perceptability of the fluorescent image to a level approaching 100 per cent. This is in sharp contrast to the restricted utilization of diagnostic information during conventional fluoroscopy where the eye uses one to five per cent of the roentgen ray photons received at the fluoroscopic screen. For a detailed discussion of image amplifier systems, their advantages and limitations, the reader is referred to the papers by Morgan, Moon, Hodges and others.^{6,7,8,10} Since the basis for a portion of the procedure that we wish to describe is dependent upon the electron image amplifying tube, a brief description of this part of the apparatus is given below.

The image amplifying tube of the electronic type consists of a cylindrical evacuated tube with an aluminum-backed fluorescent receiving screen eight inches in diameter (Fig. 1). The inner surface of this receiving screen or input phosphor is covered with a thin photoelectric layer of cesium antimony called the photocathode. The fluorescent screen transforms the radiation from the X-ray beam into a conventional fluoroscopic image. In turn, the light of the image frees electrons from the sensitive photocathode. The photoelectrons freed from the photocathode are accelerated by a 25 kilovolt potential applied between the photocathode and the open anode position at the far end of the tube. During their passage through the tube, the photoelectrons are concentrated to the one inch diameter of the anode by a simple electron optical system so that they impinge upon the input phosphor payer of the viewing screen. The acceleration and concentration of the electron pattern in the tube produces a gain in the image brightness of 750 to 1,000 times. An f 0.9 lens of 55 millimeter focal length is mounted over the viewing screen so that film recording of the image can be accomplished using a 16 millimeter camera. Appropriate automatic controls have been introduced into the electron optical sys-

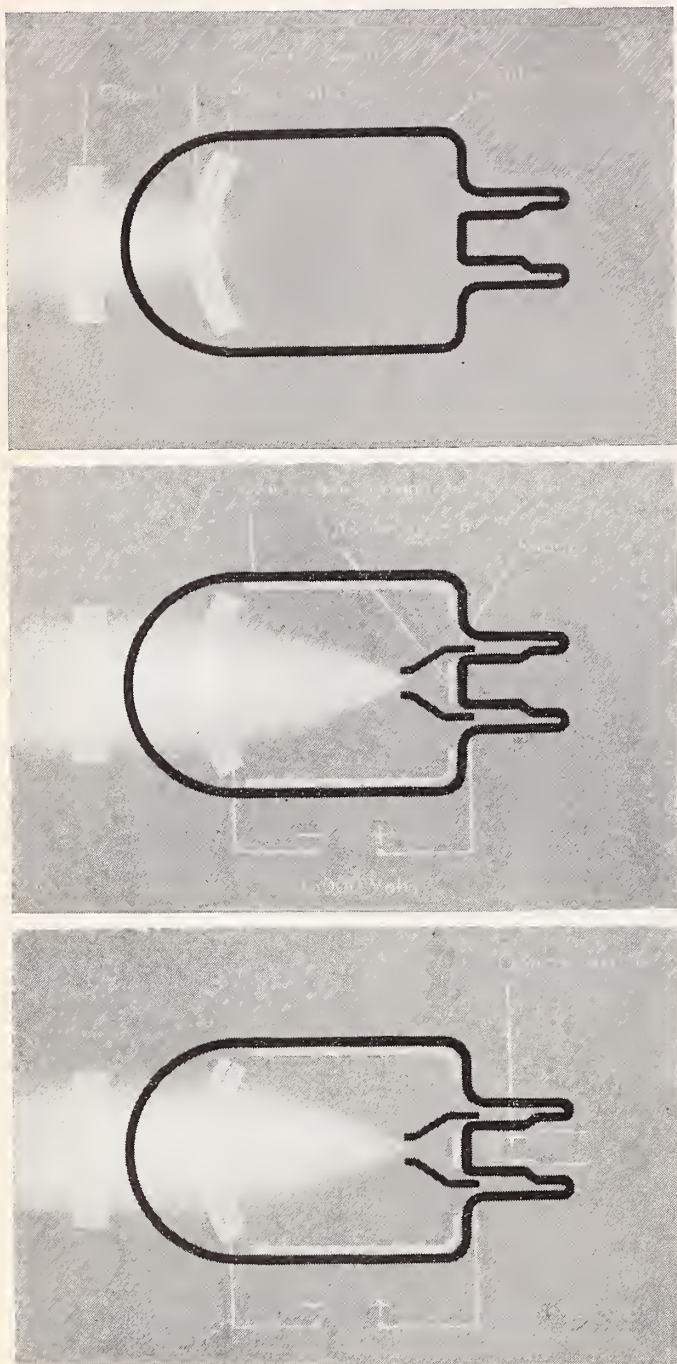


FIGURE I

A schematic diagram of an image amplifier tube is shown above. The X-ray image is received on a curved fluorescent screen housed within a high vacuum tube. This screen fixed to a thin aluminum support is in close contact with the photocathode. A fluorescent light is produced by the fluorescent screen when activated by the X-rays. The light from the screen activates a photocathode which converts the image into a corresponding emission pattern of photoelectrons. The image on the fluorescent screen is thus effectively transferred into an electronic image. An electrostatic force is applied to the electrons which converge into an electrostatic focussing lens. The acceleration of the electrons in conjunction with the electron-optical reduction of the size of the image produces a significant gain in brightness. The image on the viewing screen is viewed by means of an optical system. Moreover, subsequent optical enlargement does not cause a measurable decrease in brightness.

tem which can alter the intensity of the X-rays when various anatomic thicknesses are radiated.

A major difficulty in the arteriography of the peripheral vessels is the timing of the transit of the bolus of the dye from the injection site to the sites of obstruction. The timing of the dye is important for (1) the specific localization of the point of obstruction, and (2) the evaluation of the collateral circulation below this site. To overcome these difficulties, various procedures have been devised to measure the transit of the dye. These techniques have included:

1. Timing of the contrast media transit by means of radioactive isotopes.
2. The use of rapid film changers.
3. The moving slit-scanning techniques.¹
4. Multiple exposures on the same film.²
5. Multiple injections.

The technique that we wish to describe is based on:

1. The timing of the contrast media from the injection site to the sites of occlusion by means of simultaneous cineroentgenography under visual control using the image amplification apparatus. Narrowing and irregularities along the course of the vessels can thus be delineated by this means.
2. Having established the time of the contrast media transit, an injection of 15 cubic centimeters of contrast media is introduced. Conventional 14 x 17 films are completed centered at the obstruction sites. A polycassette is introduced in the Bucky tray so that a half of the 14 x 17 film can be exposed at a time. Moreover, the polycassette permits rapid film shifting so that a second exposure can be completed with ease.

The technique for peripheral arteriography of the femoral and tibial vessels must be modified to a minimal degree when cineroentgenography is used. The patient is placed in the supine position under anesthesia or analgesia with the leg extended preferably in internal rotation. This permits optimum projection of the distal femoral segment as well as the projection of the popliteal artery branching. Compression bands and stabilizing weights maintain the position of the leg. The 18-gauge, short-leveled needle is inserted percutaneously into the common femoral artery just below the inguinal ligament. The needle is steadied with a clamp during the injection. Nonexpansile plastic tubing with Luer-Lok adapters attached to the needle make it possible to utilize pressure devices for injection of the contrast media. Radiation protection devices are utilized to reduce exposure.

Following the insertion of the needle, five cubic centimeters of contrast media is introduced so that

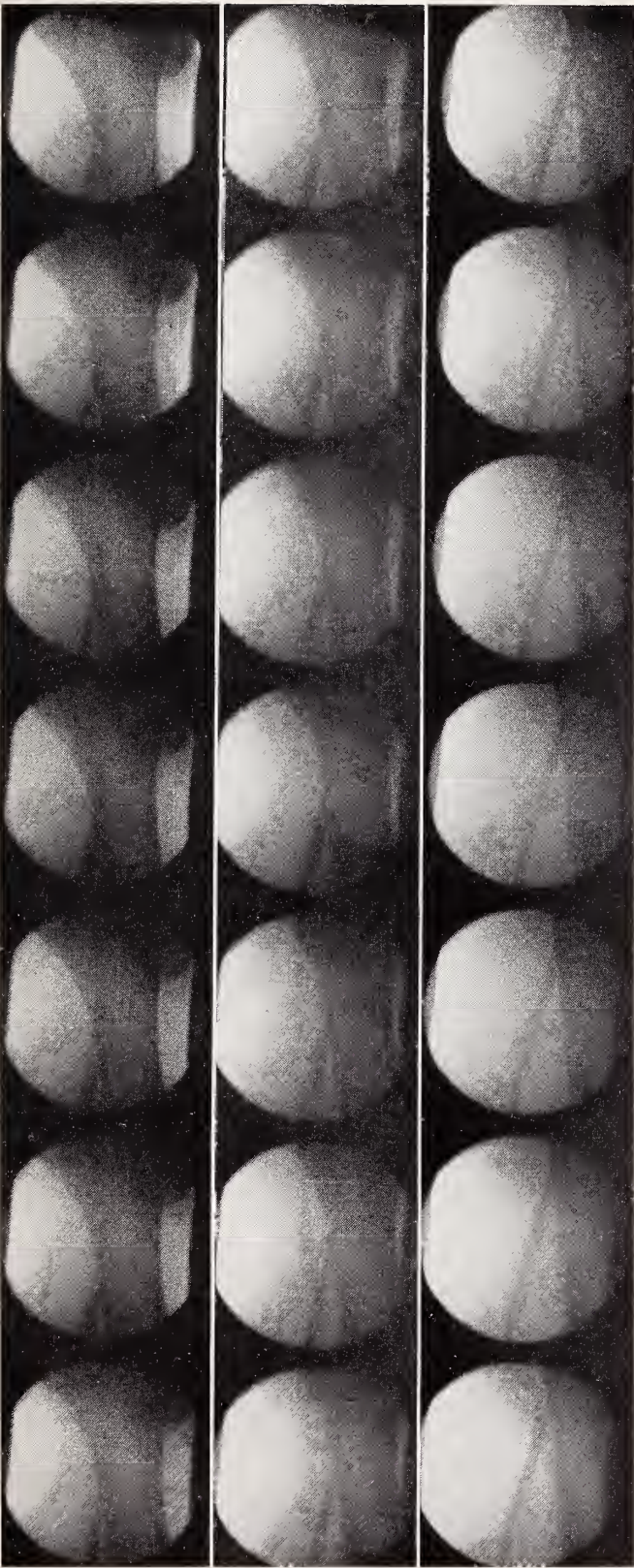


FIGURE IIA

Enlargements of 16 mm film strips taken from a case demonstrating a block at the origin of the popliteal artery. The section of strips on the left shows the course of the contrast outlining the superficial femoral. Note the collateral vessels below the block.

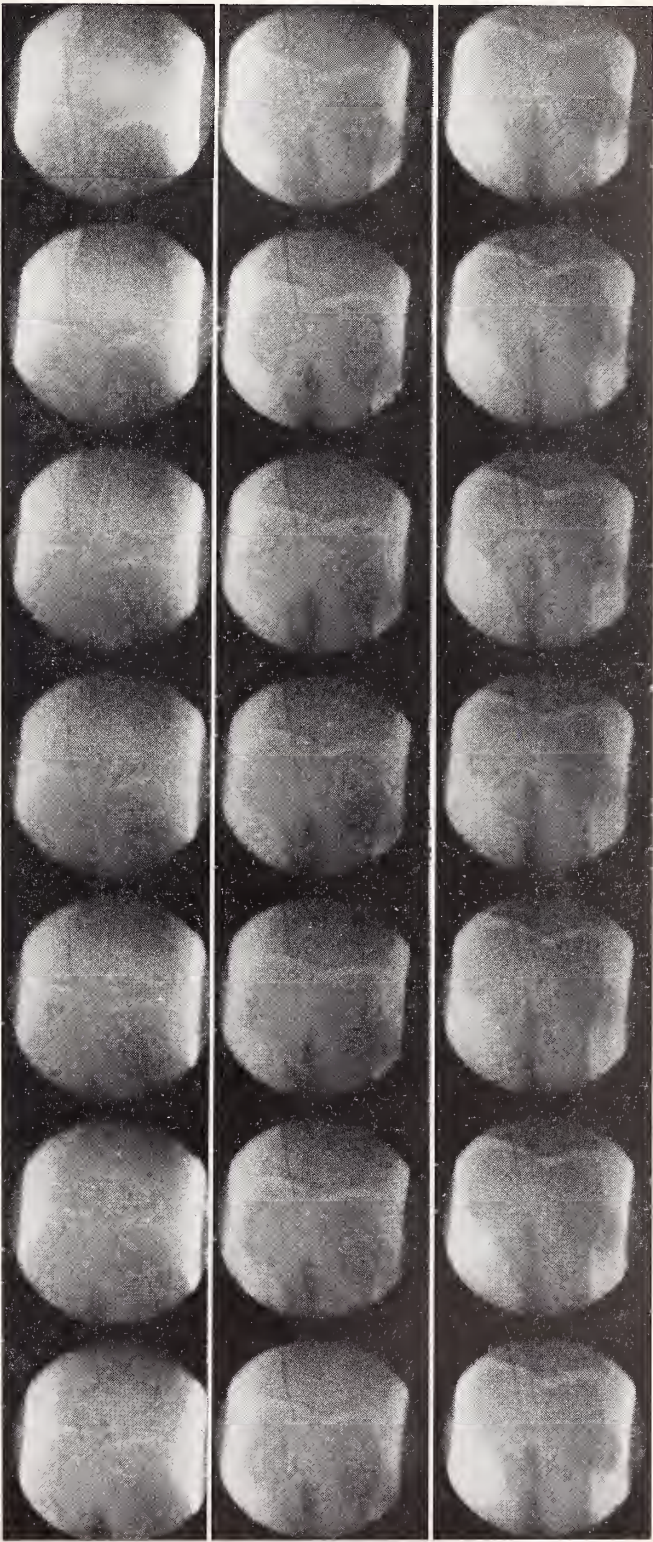


FIGURE IIB

The site of the block in the popliteal and the collateral circulation is demonstrated in this group of films.

its passage through the vessels may be visually timed to the site of obstruction. A stop watch is used to time the passage of the dye from the inguinal ligament to the site of obstruction. The second part of the examination is completed by introducing 10 to 15 cc of the contrast media rapidly and following this bolus by means of cineroentgenography (Fig 2). The dye passage can be viewed simultaneously while the cine filming procedure is being completed. The final study is completed by introducing a split polycassette used in urographic procedures (Fig. 3). The first film is exposed at the same time at which the obstruction was demonstrated. The second exposure of the remaining half of the 14 x 17 film is made one to two seconds later to demonstrate the passage of the dye into the collateral circulation. Similar films may be completed to demonstrate the structures in the region of the popliteal area and in



FIGURE III

The films have been completed following introduction of 15 cc of contrast media. Hypaque 50 per cent was used. Previous timing of the dye to the site of obstruction using visual techniques has been done. The film on the right was completed 10 seconds following introduction of the contrast. The irregular lumen of the superficial femoral vessel is adequately shown. Minimal filling of the popliteal segment by means of collateral circulation is demonstrated. The film on the left has been made two seconds later. The popliteal segment is now better visualized.

the distal tibial vessels. The cine films can be processed rapidly so that they can be viewed within thirty minutes.

A discussion of film characteristics and processing techniques utilized in this procedure is beyond scope of this paper. The films used provide a reasonable compromise between high emulsion speed and fine grain pattern. While some of the films provide excellent contrast and have a high emulsion speed, film negatives have a grainy pattern. The films are normally processed so that when they are projected they have a tone relationship similar to the X-ray films used in every day practice.

The specific advantage of the present technique is the ability to time the passage of the dye from its site of injection to the site of occlusion with ease. While the added capacity of the image amplifier makes this viewing procedure relatively easy, this may also be done by employing routine fluoroscopic apparatus and techniques.

It was to be expected that serial filming would be a natural advance in the field of arteriography once this avenue had been opened by Dos Santos.³ Rogoff,⁹ in a paper that presents his own serial long film technique, has reviewed the many roentgen procedures utilized in peripheral arteriography. It is our belief that indirect cineroentgenography offers an additional simple technique for the completion of serial peripheral arteriography. The cine technique offers considerable advantage in the demonstration of changes in the velocity of flow in diseased peripheral vessels which are not completely occluded.

SUMMARY

1. Cineroentgenography and the use of image amplification for the demonstration of peripheral segmental arterial disease is described. Prior visual study of the circulation and the timing of the contrast media to the site of vascular obstruction is easily accomplished utilizing this apparatus.
2. A simple method of timing the transit of the contrast media using the amplifier or simple fluoroscopic techniques and a stop watch can be used in this procedure. While the use of cineroentgenography is not absolutely essential, this mechanism permits the recording of the dynamics of the flow of the contrast media. Simultaneous recording of the transit of the bolus of the contrast media via cineroentgenography under visual control can be completed.
3. Routine films of the involved areas are made using a polycassette to provide sharper definition of the site of obstruction and the associated collateral circulation in this area.

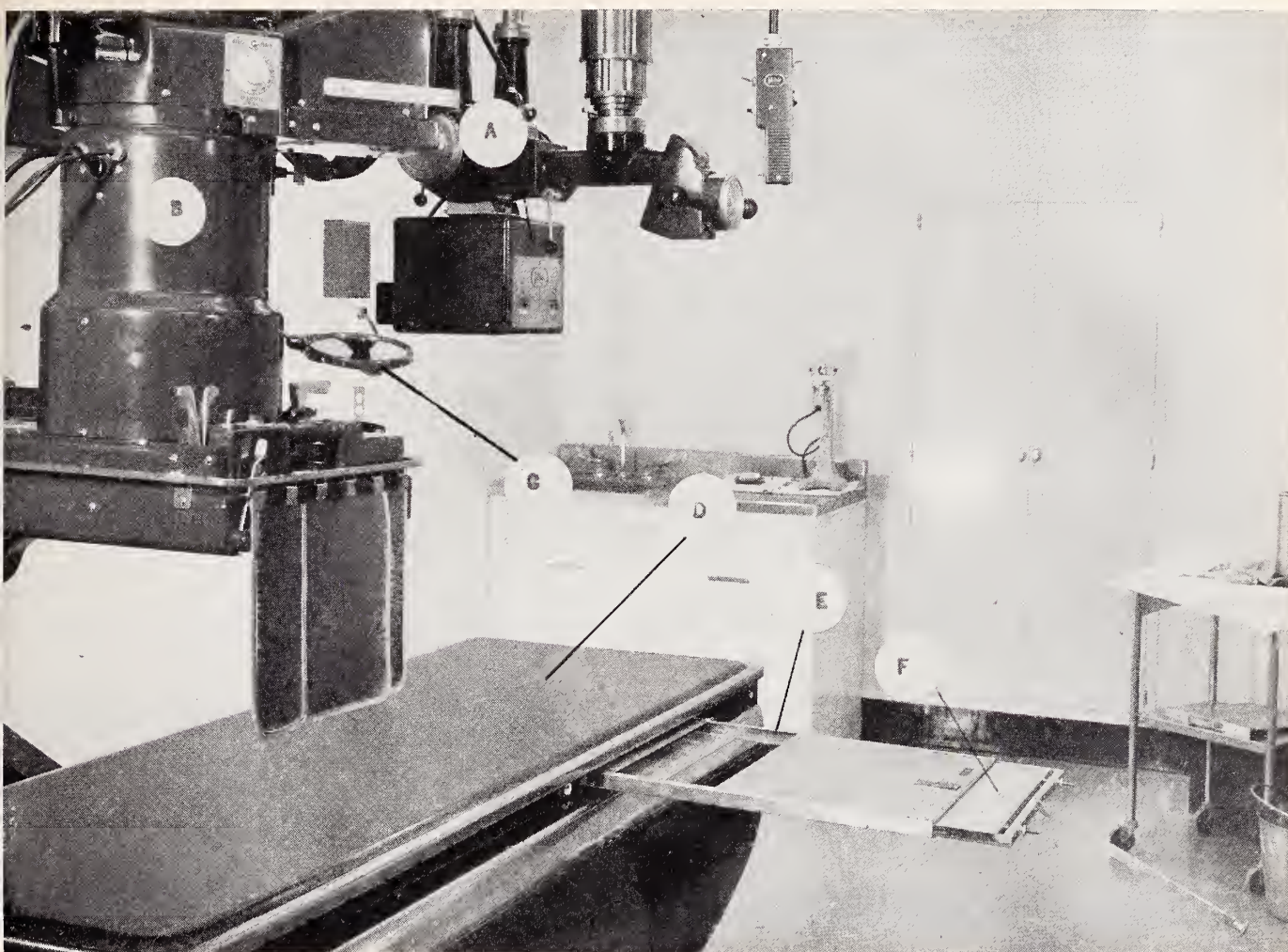


FIGURE IV

The image amplification and the apparatus used in the procedure:

- A. Overhead tube with collimating cone.
- B. Image amplifying tube in position for filming and visual viewing.
- C. Viewing mirror of the amplifier.
- D. Fluoroscopic table.
- E. Polycassette tray. This is positioned in the Bucky tray.
- F. 14 x 17 cassette in position. One half of the cassette is exposed. The film is then shifted and the second half can be exposed.

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The Use Of Enzymes And Anti-Inflammatory Drugs In Surgical Disease

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THE use of enzymes as therapeutic agents in medicine is expanding so rapidly that evaluation of their proper place, effectiveness and complications is very difficult. The use of many other therapeutic agents, particularly antibiotics, along with the enzymes makes appreciation of their effectiveness difficult.

A serious difficulty in the understanding of enzyme therapy is that in vitro and in vivo effects do not always coincide. Even worse the effects in experimental animals and humans cannot be correlated.

Although we are only approaching the threshold of logical enzymatic therapy, enzymes have been known to be effective in many clinical conditions for a long time. Physick used gastric juice (pepsin) and John Hunter used pancreatic juice (trypsin and chymotrypsin) for debridement of wounds. Many reports of the effectiveness of papain, pepsin, trypsin and pancreatic extracts can be found in the 19th and very early part of this century. These included debridement of tuberculous, infections, burns, varicose and malignant ulcers, diphtheritic membranes, clots and infections of the bladder and urethra and many other conditions. Even intramuscular and intravenous enzyme therapy was used and it was Baetzner in 1911¹ who first reported a decrease in local inflammatory reaction and edema with parenteral trypsin. This is the first note of anti-inflammatory effect. Many serious reactions, both local and general were observed with parenteral use of these impure enzymes, and so their use was abandoned.

With the production of purified enzymes we again have been able to approach clinical application with promise of success, but great caution is still necessary. In effect we are dealing with materials that are fundamental in the physiological mechanism, materials which will have a direct effect on chemical reactions in the body rather than being mediated through several chains of reaction as has been the case with most of our earlier therapeutic agents. We are dealing with catalysts so that frequently only relatively minimal amounts are needed to produce an effect if delivered at the

proper site. Being naturally occurring materials inhibitors almost always are present and their effect must be considered at all times. Being very labile proteins, pH and temperature control must be maintained very carefully.

Proteolytic enzymes which have been purified and used clinically include trypsin, chymotrypsin and pepsin of animal origin and papain (papaya), ficin (fig), and Bromelain (pineapple). A collagenase from *Clostridium welchii* has been produced and used to a limited extent.

Hyaluronidase, which depolymerizes hyaluronic acid and chondroitin sulphuric acid of the ground substance and pancreatic desoxyribonuclease which affects desoxyribonucleic acid are very useful purified enzymes.

Streptokinase (SK) though not in itself an active enzyme is included because it is an activator of human plasminogen and as Varidase (SK-SD streptodornase) has been used as an enzyme. Human plasmin (fibrinolysin) and bovine fibrinolysin are available for investigational clinical use.

Cholinesterase, lysozyme, lipase and co-enzyme 1 have only limited application in clinical investigation.

The most common uses of enzymes are for enzymatic debridement of wounds and burns, for lysis of endotracheal and endobronchial secretions, for spreading effect in tissues, for the dissolution of thrombi and for their anti-inflammatory effect.

ENZYMATIC DEBRIDEMENT

Effective enzymatic debridement can be of great value to the surgeon and the practitioner of medicine. Unfortunately no one agent is ideal for all situations, and we feel strongly that not only must different enzymes be used in different types of wounds, closed cavities and ulcers, but that during treatment change in enzymes will occasionally be necessary.⁴

In general we have found that Varidase (SK-SD) is effective in cases where blood, plasma or fresh serum are present to furnish the plasminogen for activation. It may not be effective even in these instances in patients who have high inhibitor levels because of previous streptococcal infections and even then it rapidly loses its effectiveness (in 7-10 days) because of the development of inhibitor. Pyrogenic reactions are common especially in pa-

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tients with closed cavities or large fresh wounds. Occasional general reactions do occur.

Trypsin and chymotrypsin are effective in debridement in all wound types because active enzyme is used.⁹ They are, however, irritating and many patients complain of this. In old ulcers especially radiation ulcers, partially viable or delicate fresh tissue may be destroyed. Once again inhibitors are quickly built up against this foreign protein, so increasing concentrations must be used. Eventually no effect may be obtained after 10 days to 2 weeks. With injection into closed cavities general foreign protein reactions may occur and inadvertent rapid injection into the blood stream may be very serious.

The vegetable proteases papain,¹¹ and ficin,⁹ and others are effective debriders, but are irritating especially since they are active at acid pH. This irritation is so severe that it limits their usefulness although some investigators continue to report on their use.

None of these enzymes are effective on burn eschars or infected collagenous tissue.⁸ *Escherichia Welchii* collagenase has been shown to be effective in these situations but will probably never be available for clinical use. Maggots used so effectively in debridement of osteomyelitis are effective because they produce a collagenase and a tryptase. Other sources of collagenase undoubtedly will be found.

We have been particularly interested in human plasminogen activated by streptokinase and have found it to be the most generally useful of the enzymes available.^{2,6,19} It is effective in fresh and moderately advanced infected wounds, empyemata and ulcers. It is non-irritating, does not produce a pyrogenic reaction when introduced into closed cavities, and is followed only gradually by inhibitor production. We have found bovine fibrinolysin to be of about equal effectiveness and toxicity.

With acute abscesses and infections incised and drained routinely, fibrinolysin treatment without antibiotics resulted in a clean wound ready for discharge of the patient in half the time of those treated by routine dressings and parenteral antibiotics.² Cultures became sterile sooner than when antibiotics alone were given. All were completely free of debris and purulent exudate within three days.

With more chronic complicated wounds treatment may be continued only until the wound has become thoroughly debrided, when secondary closure can be carried out or it may be continued till the wound is healed. In most instances where the latter course has been followed we have used human fibrinolysin alone, but in many cases we have used hyaluronidase after complete debridement to

hasten healing.^{6,19} Healing time has been shortened as much as 1/3 over other type dressings after complete debridement.

Deep sinus tracts secondary to infections, post-operative, and even with underlying bone involvement or deep abscess cavities have been treated successfully with instillation of enzymes. Sinuses of 2 years duration or longer have resulted in complete healing. In the case of an underlying abscess cavity, unable to drain because of too small a sinus, instillation of enzymes will permit rapid drainage and satisfactory healing in most cases. Fig. 1 A.

With intestinal fistulae healing can be facilitated by the use of fibrinolysin and hyaluronidase. In the absence of organic obstruction distal to the fistula, or a foreign body in the fistula, healing may be expected in 1 to 6 weeks. In this instance the enzyme is used in a water soluble gel and the sinus is filled with the gel. Water soluble gel is also used for shallow wounds or ulcers in order to maintain contact with the surface to be debrided.

In empyema, if it is of less than one week's duration, complete lysis of the exudate and re-expansion has been obtained in every case. Two methods have been used; one with needle aspiration and instillation of plasmin at 12-24 hour intervals, and the other with tube drainage, instillation of plasmin with clamping of the tube for 4-6 hours and then suction until the next day's instillation. With empyema cavities of as much as 3 month's duration, complete healing has been obtained. Even where healing is not obtained as with carcinoma

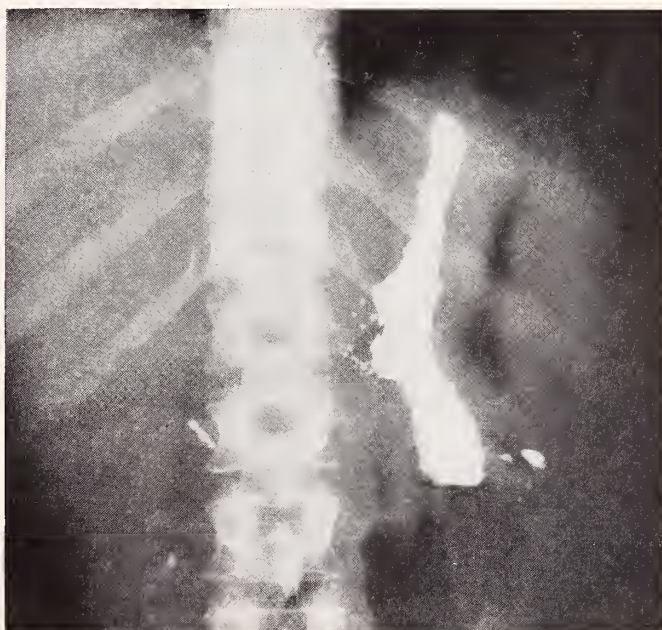


FIGURE 1A

Patient with subphrenic abscess with long narrow sinus to skin. One month post-operative with resection of stomach, left lobe of liver and post-operative radiation therapy for carcinoma of liver. Healed completely in one month.



FIGURE IIA

Infected amputation stump, great toe, for diabetic gangrene. After re-amputation and treatment with Dakins solution, without success.

the cavity becomes clean, systemic reaction is minimized and the patient is left with a cavity which can be closed more easily by operation. In cases of carcinoma with empyema, after debridement, simple drainage with a pin tube has sufficed.

Limited amputations which otherwise would be unsuccessful can be done employing adequate debridement. Local amputations for gangrene which were doing badly, and would have resulted in mid-thigh amputation have been saved by enzymatic debridement. In several cases recently we have performed local amputation and begun plasmin therapy immediately with complete success. Fig. II A B C. Secondary closure or grafting with hyaluronidase dressings have been used to close the wounds subsequently, or long term therapy has been maintained with complete healing.

Even with metallic foreign bodies (for example, bone prostheses) healing over the retained prosthesis has been obtained, usually without antibiotics. In 4 of 5 cases with a hip prosthesis complete healing was obtained.

HYALURONIDASE

In addition to its effect in hastening healing of clean wounds hyaluronidase can be useful to the surgeon by its effect on ground substance resulting in more rapid absorption of medications by the subcutaneous route.³ Materials which ordinarily can be given only by intravenous infusion can be



FIGURE IIB

Wound one week after beginning plasmin.

safely, effectively and painlessly administered by clysis with hyaluronidase. This is particularly useful in infants or in chronically ill patients whose veins are at a premium. It also makes regional block anesthesia more effective and more rapid. Hyaluronidase has been shown to be particularly effective in facilitating resorption of edema fluid and hematoma particularly in and about joints. The effect is rapid, and usually only one to a few injections at daily intervals are necessary to maintain the relief. Fibrosis and scarring are minimized or prevented. There are no significant side reactions to this drug and it is hard to see why it is not used more frequently. Fibrinolysin is also effective in dissolution of hematoma in cases of serious traumatic injury or post-operatively. One or two injections with subsequent aspiration and pressure dressings are usually sufficient. The material used for systemic therapy rather than topical fibrinolysin should be used in these cases to prevent pyrogenic reactions.



FIGURE IIC

Healed two months after treatment started.

PANCREATIC DORNASE

Perhaps the most common complication of surgery is pulmonary atelectasis and pneumonitis. This is a particularly serious complication in pulmonary or cardiac surgery. Even the very thick tenaceous sputum which frequently follows anesthesia or with oxygen therapy may cause serious difficulty by strain on wounds and the patient may refuse to raise the material because of pain with resultant pulmonary complications. Varidase and trypsin have been suggested for endobronchial use but we have found them irritating, and relatively ineffective.¹⁵ Wetting agents such as aleva are very slow and although they may help in preventing these complications, rarely effect it significantly.

We have found pancreatic dornase (desoxyribonuclease) to be rapidly effective in liquefying sputum and relieving atelectasis due to mucus plugs.⁵ It has no significant irritation and no significant toxic reactions. 100,000 units in 2 cc. diluent are administered by an aerosol with an oxygen or air flow of 6-8 liters/minute. Treatment 1 or 2 times a day is usually sufficient since the drugs remain effective for a long time. Occasionally with very acute situations it may be used 3 times a day. Ordinarily 2-4 days of treatment are sufficient for complete relief and very often improvement begins immediately.

In our experience endotracheal aspiration have been abandoned in cases where dornase was used.

It is equally valuable in atelectasis or other pulmonary complications with bronchial plugs as seen in post-influenzal staphylococcal pneumonia and in some patients with asthma.¹⁸ Although useful in chronic pulmonary diseases such as bronchiectasis and asthma we have found that it is particularly of value in acute complication of these conditions. Acute lung abscesses have also responded to inhalations with rapid emptying and collapse.

ANTI-INFLAMMATORY AGENTS

The rationale for combining a discussion of enzymes and anti-inflammatory agents in surgery, in one paper is perhaps difficult to justify, except some of these enzymes have been used particularly for their anti-inflammatory effect. Many drugs of widely divergent nature have been found to have so-called anti-inflammatory effects. These include the cortico-steroids, several proteolytic enzymes, and activators, phenyl-butazone, compounds prepared from egg yolk, peanut oil, soybeans,^{Garley et al} piperidines, chlorpromazines, cysteine derivatives and many other materials. Even pyrogenic reactions have anti-inflammatory effects. We will be forced to limit ourselves to the more commonly available drugs used primarily for so-called anti-

inflammatory activity; enzymes, cortico-steroids and phenyl-butazone.⁸

What is even more troubling to me is that we do not really understand the mechanism of anti-inflammatory action, even of a single drug. Furthermore controlled clinical studies are very rare and in almost all cases many drugs including several antibiotics and other potent materials including antihistaminics have been used, at the same time as the drugs being investigated. It must never be forgotten that these are potent drugs and that they all have serious side reactions. It is also true that with prolonged treatment or excessive dosage the anti-inflammatory effect itself may be harmful. This is particularly true with cortico steroids in infections, and in conditions such as peptic ulcer.

In spite of their undesirable reactions and the fact that we do not understand their mechanism of action these materials are obviously of great value. They can be particularly useful in surgery because they will be used ordinarily for only short periods of time. This decreases the danger of side reactions. Before mentioning the conditions in which they may be helpful, the management of the patient with a surgical disease who has been on long term cortico-steroid therapy must be mentioned. These patients should not only continue to receive their cortico-steroid; they will need large amounts to cover their acute illness and during and after any operation. For as long a time as 18 months after the discontinuance of a long course of steroids, the adrenals may be atrophic and unable to cope with a serious surgical situation without help.

The newer cortico-steroids (meticorten, prednisolones, dexamethasone, and triamcinolone) are said to have better anti-inflammatory effect with less side reactions. Certainly there seems to be a decrease in electrolyte abnormalities, but the balance sheet for other side reactions has yet to be tabulated. Cortico-steroids may be used pre-operatively to soften scar tissue and adhesions and post-operatively to lessen scar and adhesion formation. With severe surgical infections they may be life-saving in combination with antibiotics, and may make it possible to bring to surgery patients who would otherwise be lost. Here one must consider conditions such as acute colitis, enterocolitis, proctitis and other similar conditions. In an occasional patient with serious oozing due to excessive capillary fragility or acute thrombocytopenia cortisone may aid in the control of the hemorrhage.

For traumatic hematoma edema and local inflammatory reactions cortico-steroids are less effective than the enzymes. Topical hydrocortisone may be effective here and it certainly is very effective by local injection in bursitis, traumatic arthritis and similar conditions.

The story of the enzymes as anti-inflammatory agents is a fascinating one. Enzymes; papain, pepsin, trypsin and pancreatic extract were used effectively as local debriding agents as long ago as the early 1800's. Trypsin was used intravenously in the late 1800's and in 1911, Baetznner noted that it had a strong anti-inflammatory activity.

More recently Innerfield and others used intravenous trypsin in an attempt to dissolve intravascular thrombi.¹² They also noted an anti-inflammatory effect even with small doses and subsequently it has been shown that trypsin,^{13,17} chymotrypsin¹⁰ and varidase¹⁶ have such an effect with small doses intramuscularly. Unfortunately rather severe pain at the injection site was very common, and Arthus reactions and more general, sometimes severe reactions have been reported. As a result the use of these materials by the buccal route has now become common.¹⁴ Although denied, local irritations and reactions occur with this method.

These enzymes are particularly useful for relief of traumatic hematomata, edema and for rapid defervescence of cellulitis and abscesses. The inflammatory phase of thrombophlebitis has been controlled by this method without any effect on the thrombus itself. Edema in gastro-intestinal anastomoses causing obstruction has been favorably effected by a few days treatment with intramuscular or buccal trypsin or chymotrypsin.

In our investigations of intravenous fibrinolysin for the lysis of vascular thrombi, we have also noted a significant effect on infections present. Since we are using large amounts of enzyme and activator we feel that this effect is not an anti-inflammatory effect, per se, but rather an actual hastening of the dissolution of purulent exudate by the enzyme activity. We have seen abscesses with resistant organisms (staph. aureus) liquefy, drain and heal within 3-5 days after the infusion of fibrinolysin. We have also seen patients with chronic inflammatory disease of the lung begin to cough up copious amounts of sputum and have defervescence of their fever within 48 hours after fibrinolysin infusions without antibiotics.

Johnson et al have reported marked improvement and healing of lung abscesses with intravenous pancreatic dornase, which has no obvious anti-inflammatory effect.

The use of these enzymes for treatment of antibiotic resistant infections, and for the lysis of intravascular thrombi particularly cerebral and coronary thrombi are fields in which there is great promise but in which much more investigation is necessary. There seems to be little question that fresh thrombi can be dissolved and that resolution of infections can be hastened by systemic treatment with fibrinolysin and the latter also by dornase.

Intravenous hyaluronidase is being investigated

for its effect on cerebral edema and for improvement in diffusion in other conditions.

As I stated in the beginning we are only on the threshold of enzyme therapy. This is fundamental therapy which can have a direct effect on all metabolic processes. We stand today where we stood 30 years ago with hormone therapy and 20 years ago with antibiotic therapy.

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Diuresis And Diuretics In Congestive Heart Failure

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PHYSIOLOGICAL CONSIDERATIONS IN HEART FAILURE

THE exact mechanisms causing a retention of salt and water in heart failure are still in doubt, although considerable effort has been directed toward the solution of this problem. The regulation of excretion of sodium and its associated anions assumes great importance in the regulation of body fluid volume. An increase in reabsorption of as little as one per cent of the filtered sodium per day would mean the gain of about 11 grams. This would result in the retention of more than three liters of water to maintain the normal osmolarity of the extracellular fluid.

The kidney has long been implicated in the sodium retention and edema associated with congestive heart failure. A number of theories have been advanced in an attempt to explain the inability of the kidneys of these patients to maintain normal electrolyte and water balance.

Glomerular filtration rate: Acute reduction in glomerular filtration rate has been proposed as a cause of edema in congestive heart failure, since patients in cardiac failure often have a reduced renal plasma flow and glomerular filtration rate. With various forms of mild exercise, the filtration rate of the majority of cardiac patients studied fell well below the 70 cc. per minute rate that was considered the critical level for sodium retention. The mechanistic explanation for the development of edema under these circumstances is that with a reduced volume of filtrate, it passes down the tubules more slowly. This increases the time during which the fluid is in contact with the cells of the tubules and results in an increased amount of sodium and water reabsorption. However, considerable disagreement exists as to what extent filtration rate alone influences sodium retention. Indeed, many investigators disclaim any correlation between filtration rate and the rate of sodium excretion. Certainly the filtration rate cannot be the only factor, since numerous cases have been recorded with filtration rates well below the supposed critical level without the development of edema. Furthermore, a number of investigators have pointed out that while acute reductions in filtration rate may decrease the rate of sodium excretion, there is frequently a definite and

marked time lag between the restoration of filtration rate to normal levels and a resumption of control rates of sodium excretion. This occurs following reduced filtration rates caused by tilting, by vascular obstruction, or by a pneumatic cuff about the thigh. Other longer term studies showed no relationship between recovery from congestive heart failure and change in filtration rate.

Cardiac output and venous pressure: Several investigators have proposed that the retention of sodium in congestive heart failure is directly related to a reduction in cardiac output. Admittedly, renal hemodynamic changes resulting from a reduction in cardiac output could result in sodium retention and edema. However, other mechanisms must also operate to explain the heart failure and edema that may occur with a high cardiac output associated with anemia or chronic emphysema.

Acute elevation of venous pressure in experimental animals has been demonstrated to cause sodium retention. Chronic changes in renal venous pressure do not uniformly result in edema unless hepatic venous congestion has been induced simultaneously. These observations may indicate that any effects a high venous pressure may have on sodium retention is due to effects other than a direct action on the kidney.

Humoral factors and sodium retention: The steroid hormones of the adrenal cortex have long been known to exert a powerful influence on electrolyte excretion. Aldosterone, the most recently discovered of these, has been detected in adrenal venous blood of dogs and monkeys and in the urine. While hydrocortisone may be present in a higher concentration in the peripheral blood of dog and man, aldosterone dominates the steroids released in terms of its effect on electrolyte excretion. The powerful effect of the synthetic steroid desoxycorticosterone in increasing renal tubular sodium reabsorption stimulated the search for increased rates of excretion of salt-retaining steroids in the urine of edematous patients. These investigations led to the discovery of aldosterone.

Aldosterone is present in detectable amounts in normal urine. Increased amounts of the steroid appear in the urine of normal man during sodium restriction. The increased steroid excretion is correlated with the reduction in urinary sodium excretion during the period of low sodium intake and returns to normal levels as sodium excretion in-

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creases after resumption of a normal diet. These reciprocal changes in aldosterone and sodium excretion in the urine are not accompanied by significant alterations of glomerular filtration rate or urinary 17 keto steroids or 17-hydroxycorticoids. This inverse relationship between sodium excretion and aldosterone output is also seen in patients developing edema and during subsequent diuresis, either spontaneous or induced. These observations have led to the tentative proposal that aldosterone is the adrenal cortical steroid responsible for maintaining normal sodium and potassium balance and an important factor responsible for sodium retention and edema in congestive heart failure. It should be emphasized that there is not yet any clear-cut evidence for a causal relationship between an increased aldosterone excretion and the development of edema.

Although the mechanism of sodium retention in cardiac failure is still controversial, its importance is clearly demonstrated by the therapeutic success of measures used for circumventing it, such as diuretics and a low-sodium diet.

CLINICAL BIOASSAY AND POTENCY ESTIMATION
OF DIURETICS

It is well known that many factors operate to influence the treatment of edema. Furthermore, many factors operate to influence the response to

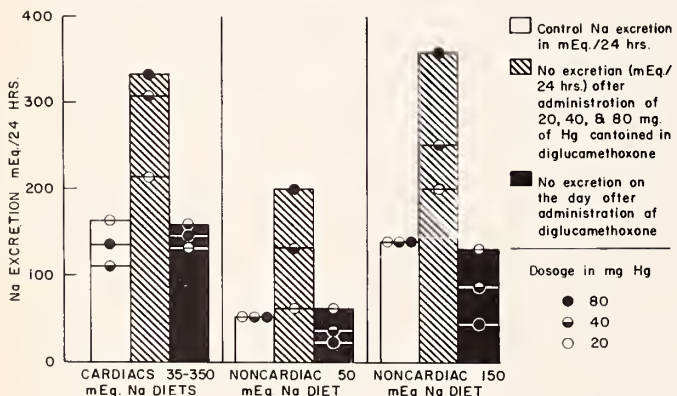


FIGURE I

A comparison of the increase in sodium excretion resulting from the administration of a mercurial diuretic to a group of cardiac patients and a group of non-cardiac subjects receiving a diet containing either 50 mEq. of sodium or 150 mEq of sodium. The open bar graph indicates the control observations before receiving the different doses of the mercurial diuretic. The response indicates that non-cardiac patients receiving 150 mEq of sodium in the diet respond in essentially the same way as do the cardiac patients except that during the second 24 hour period after drug administration, the non-cardiacs retain sodium whereas the sodium excretion rate in the cardiac patients merely returns to the control value. The non-cardiac subjects receiving a 50 mEq diet do not respond with as great an increase in sodium excretion as do the non-cardiacs receiving a 150 mEq diet or the patients with heart failure.

various diuretic agents. Considering these factors as well as the large numbers of diuretics that have been presented to the practitioner, there is a need for some method by which the clinician may evaluate the relative potency of various diuretic agents. Some of our personal studies have been directed toward this problem. We have studied patients under controlled conditions so that their water and electrolyte balances could be established.

Our observations indicate that the normal individual and the patient with congestive heart failure do not differ significantly in their respective responses to various mercurial diuretics by the excretion of sodium, chloride, potassium or water or the change in body weight. This is illustrated in Figures 1 and 2. It is seen that the degree of increase in sodium excretion in the cardiac and the non-cardiac (eating a 150 mEq sodium diet) is similar. There is, however, a difference in the degree of response in the non-cardiac (as well as the cardiac) with a difference in the sodium content of the diet. Thus, it became necessary for us to establish a "potency estimation" of the dietary sodium in evaluating the response to a given diuretic. This is illustrated in Figure 2 (A to D) which shows the various potency estimations of a given diuretic agent in terms of its ability to affect changes in sodium, chloride, and water excretion and body weight when the patient is receiving two different diets. Thus, when the patient is receiving the higher sodium intake, the diuretic agent produces a response in

TABLE I
POTENCY ESTIMATIONS OF DIETARY SODIUM USING
DIET II* AS A STANDARD

FUNCTION	POTENCY ESTIMATION
Sodium	RL = 1.5
	R = 1.8
	RU = 2.2
Chlorides	RL = 0.1
	R = 1.4
	RU = 1.7
Water	RL = 1.8
	R = 2.8
	RU = 12.6
Weight	RL = 1.7
	R = 2.4
	RU = 4.2

*Diet I = 150 mEq Na. Diet II = 50 mEq Na.

R is the best estimate of the potency of Diet I (150 mEq Na) compared to the standard, Diet II (50 mEq Na)

RL, RU = Lower and upper five per cent fiducial limits (calculated by Fieller's theorem)

R means that one mgm. of diglucomethoxane (SU -1775-Ciba) given at a diet level of 150 mEq Na/day is as effective as 1.8 mg. diglucomethoxane when given at a diet level of 50 mEq/day in producing increased output of sodium.

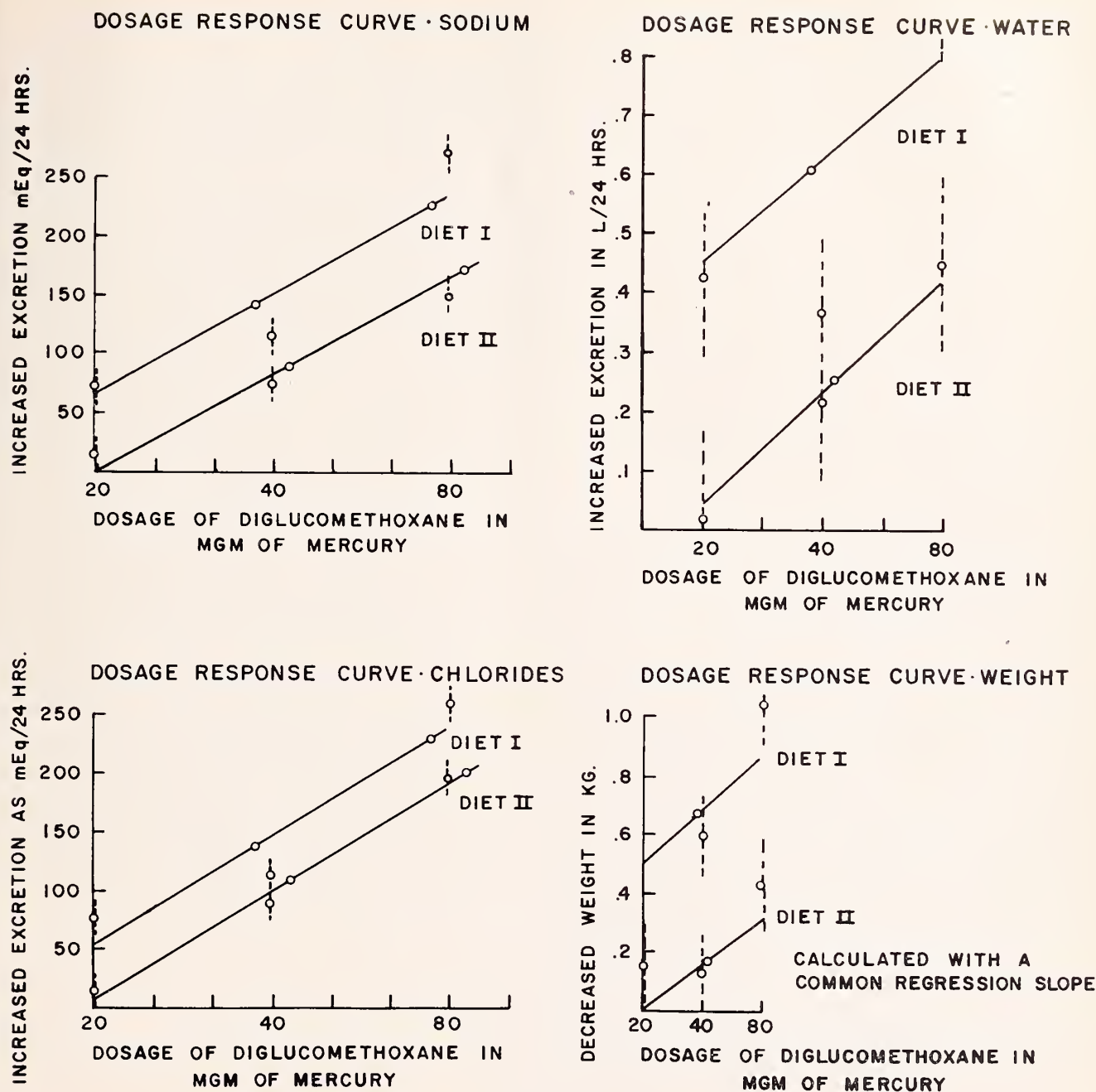


FIGURE II

Dose response curve to a mercurial diuretic in a patient receiving a diet containing 50 mEq as compared to one containing 150 mEq. The increase in sodium, chloride, water and reduction in weight was greater when the patient received the 150 mEq sodium diet as compared to the 50 mEq sodium diet. Therefore, dietary intake of sodium must be standardized for maximum accuracy when evaluating the excretion rate of sodium as a response to a mercurial diuretic.

sodium excretion that is 1.8 times as great as that observed when he is receiving only 50 mEq of sodium in his diet. Similar figures can also be obtained for chloride, water and weight (Table 1).

The following conclusions may be drawn from our bioassay study of mercurial diuretics:

1. The response to a diuretic is distinctly dependent upon the dose and dietary sodium content.
2. The most significant change seems to be the increase in sodium (and chloride) while other functions (weight and water) are secondary.
3. Sodium excretion is the most reliable estimate

of potency of diuretics in general (exception: chloride is slightly better for mercurial diuretics).

Bioassay of carbonic anhydrase inhibitors presents a specific problem in bioassay since it is difficult to establish a dosage response curve. However, a maximum effective dose can be determined when very small doses are administered in a log dose incremental fashion until further increases in dosage result in no further increase in the excretion rate of sodium. This point was arbitrarily termed the "apex" of the curve. Figure 3 shows that with one of the experimental drugs studied, ethoxzolamide

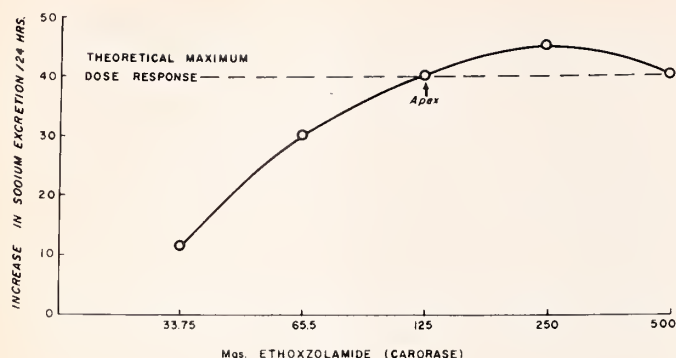


FIGURE III

Dose response curve for ethoxzolamide. See text for description.

(Cardase), there was a minor increase in the excretion rate for sodium at the small dose tested (33.75 mg.) followed by an increasing magnitude of response until the 125 mg. dose was reached, at which point the curve flattened out and became parallel to the base line. This same procedure was used in the establishment of the "apex" point for acetazolamide (Diamox). After this "apex" was established, a dose of at least two times that dose at the "apex" was administered as the testing dose for the particular drug. Thus, in the cases of acetazolamide (Diamox) and ethoxzolamide (Cardase), the dosage for each test was 250 mg. daily (Figure 3).

The significance of this data has been established by the analysis of variance. This indicates that there is no significant difference between the two carbonic anhydrase inhibitors in their ability to augment the excretion rate of sodium, (Figure 4) potassium, chloride, or water or to induce a change in weight. Application of student's "t" test to the changes following each drug further shows that the increases for the excretion of sodium, potassium and water are significant as well as the change in weight, but that the changes in chloride excretion are of borderline significance.

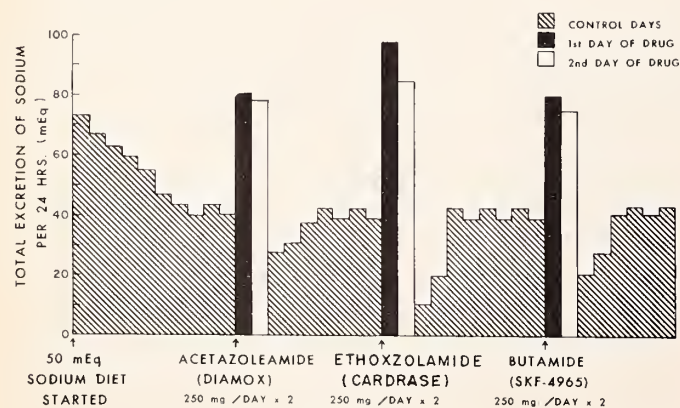


FIGURE IV

Sodium excretion rate during the control period while receiving a standard 50 mEq diet and the response to three carbonic anhydrase inhibitors. At maximum doses the response rate to the three drugs was approximately the same.

GENERAL PHARMACOLOGY OF DIURETICS

Mercurial Diuretics:

Except for a depression of the renal tubular reabsorption of sodium chloride and water, no consistent change has been observed to occur following the administration of a mercurial diuretic. It is generally assumed that specific transport systems are present in the cells of the renal tubule for the reabsorption and secretion of different ions and compounds present in the glomerular filtrate and the blood. The composition of the urine before and during mercurial diuresis indicates a highly selective inhibitory action on only a few of these transport mechanisms. Increased rate of water excretion usually follows the increase in sodium and chloride excretion. During mercurial diuresis glomerular filtration rate may rise, fall or show no change. Changes in renal plasma flow show a similar inconsistency. One must conclude from these observations that changes in glomerular filtration rate or renal plasma flow are not involved in the diuretic effect of these agents. Unless there is a massive diuresis, potassium excretion is not increased significantly.

The rate of excretion of mercury after subcutaneous, intramuscular, and intravenous administration of meralluride is quite similar in patients with minimal edema. This indicates that the rates of absorption from both subcutaneous and intramuscular sites are very rapid i.e., up to 90 per cent within 24 hours. The increase in sodium excretion parallels the excretion of the mercurial. In patients with severe heart failure, the urinary excretion of mer-

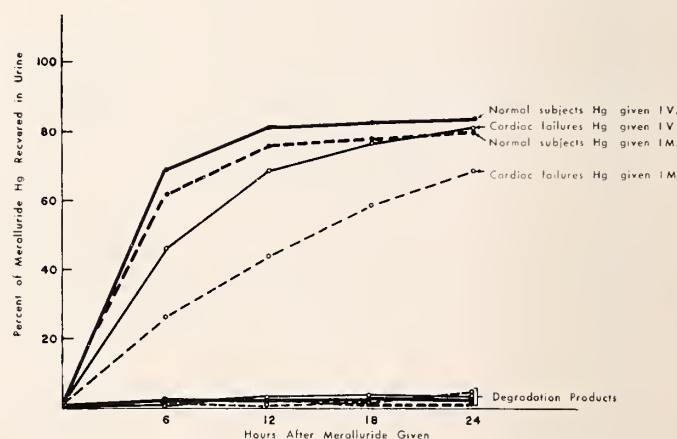


FIGURE V

The excretion rate of meralluride (Mercurydrin) by the kidneys following administration of the drug by the intravenous and intramuscular routes to normal subjects and cardiac patients. Following the intravenous route in cardiac patients, the excretion rate was about the same as the excretion rates in normal patients following intramuscular or intravenous administration. When the drug was given to cardiac patients by the intramuscular route in the presence of edema, there was a delay in delivery of the meralluride to the kidney and hence a decrease in excretion rate.

curials may be delayed somewhat following intramuscular or subcutaneous injection due to the poor circulation (Figure 5). Unless absorption is delayed, 30 per cent or more of a therapeutic dose of a mercurial given parenterally, is usually excreted in less than six hours.

Oral therapy with mercurial diuretics has been unsatisfactory until the recent introduction of chlormerodrin (Neohydrin). Not only is chlormerodrin better absorbed from the intestinal tract than is the case with other mercurials (up to 15 per cent) but it is several times more potent than other mercurials currently available.

Pharmacology of Cytosine and Xanthine Diuretics:

Xanthine derivatives, such as aminophylline and various salts of theobromine, have long been familiar adjuncts in cardiac therapy. These compounds are derivatives of purine which is found in nucleic acid.

Aminometradine (Mictine) and aminoisometradine (Rolicton) are recently introduced compounds proposed for use as oral diuretics. These compounds are derivatives of the pyrimidine base cytosine which also occurs in nucleic acid.

Aminophylline, aminoisometradine (Rolicton) and aminometradine (Mictine) have similar effects on renal transport mechanisms for various electrolytes. All three cause an increase in excretion rate of sodium and chloride, slight inhibition of ammonia and phosphate without consistent changes in potassium and bicarbonate excretion. The increase in water excretion is probably secondary to the increase in sodium excretion. The maximum effects of intravenously administered aminophylline occur acutely within two hours. Aminoisometradine (Rolicton) and aminometradine (Mictine) exhibit their maximum effects within six to 12 hours after oral administration.

Carbonic Anhydrase Inhibitors:

The use of carbonic anhydrase inhibitors as oral diuretics has found distinct clinical application in the treatment of mild edema due to numerous causes. Acetazolamide and ethoxzolamide are the only compounds of this type available for clinical use. They produce their effect by inhibiting sodium reabsorption in the renal tubules. This is a secondary response to the carbonic anhydrase inhibitory effect and consequently a blockade of the exchange of hydrogen ions for sodium in the cells of the renal tubules. They do not increase chloride excretion. Acetazolamide given orally has no significant effect on glomerular filtration rate or on renal blood flow.

Whereas mercurial diuretics continue to produce diuresis when administered daily, the carbonic anhydrase inhibitors lose their effectiveness after two or three days (Figure 6) and can be used when an

EFFECT OF CARDRASE (ETHOXZOLAMIDE) ON SODIUM AND POTASSIUM EXCRETION CONTINUOUS DAILY ADMINISTRATION

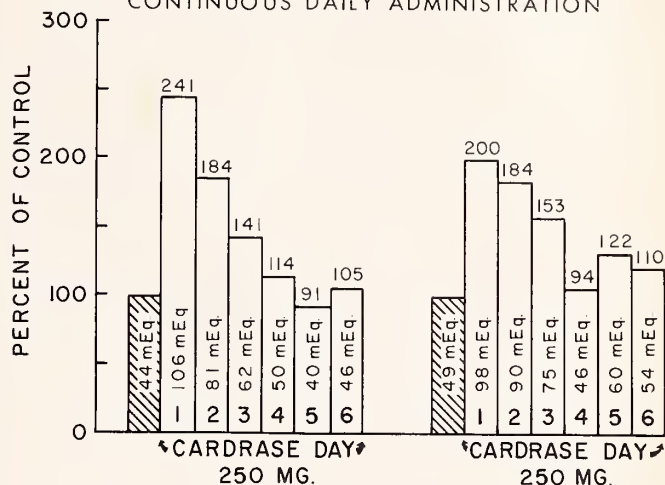


FIGURE VI

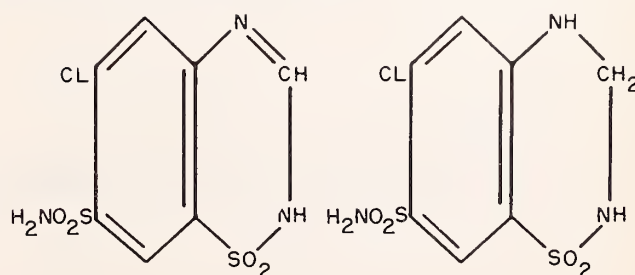
The effect of continuous daily administration of a carbonic anhydrase inhibitor ethoxzolamide. Within three days after initiation of therapy, there was a decrease in response rate and the sodium excretion approximated the control value as tolerance developed.

interrupted dosage regimen is feasible. When used in the treatment of heart failure acetazolamide and ethoxzolamide should be given for two or three successive days, allowing at least two days between drug courses. Another scheme is to give the drug as a single dose every other day. For maximum response it is sometimes necessary to allow two days between drug administrations. Mercurials may be given between courses of the carbonic anhydrase inhibitors.

Acidosis due to renal failure is a definite contraindication to the use of carbonic anhydrase inhibitors. Patients not only fail to respond to the diuretic but the effect on the carbonic anhydrase systems throughout the body accentuates the acidosis and disastrous results may ensue.

Chlorothiazide:

Recently chlorothiazide (Diuril) has been introduced for oral use (Figure 7). With effective diu-



Chlorothiazide Hydrochlorothiazide

FIGURE VII

Structural formulae for chlorothiazide and hydrochlorothiazide.

ELECTROLYTE EXCRETION PATTERN OF HYDROCHLOROTHIAZIDE

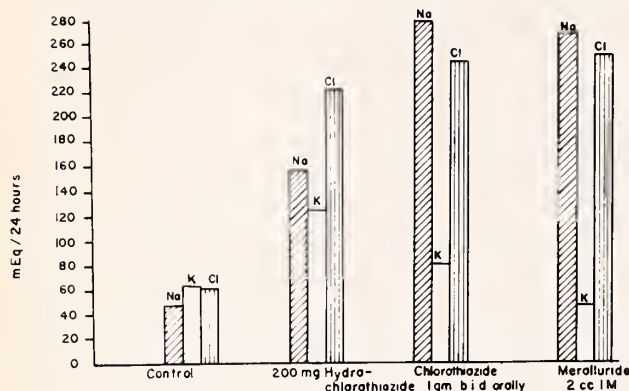


FIGURE VIII

The excretion rates of sodium, potassium and chloride comparing hydrochlorothiazide, chlorothiazide, and meralluride with the control output of these electrolytes.

retic doses, the increased rate of sodium excretion is nearly balanced by increased chloride excretion (Figure 8). At higher dosage levels, the urine becomes alkaline from increased bicarbonate excretion that is characteristic of carbonic anhydrase inhibition in the renal tubules. Acidosis and resistance to the diuretic action does not develop on continued administration until there is a relative depletion of body sodium (Figure 9). When this occurs, the excretion rate approximates the sodium intake and the patient remains at dry weight. During diuresis from chlorothiazide, there is no significant change in glomerular filtration rate or renal plasma flow with therapeutic doses.

In human bioassay studies, there is an increased diuretic response from this agent as the oral dose is raised up to approximately 2,000 mgm. When the

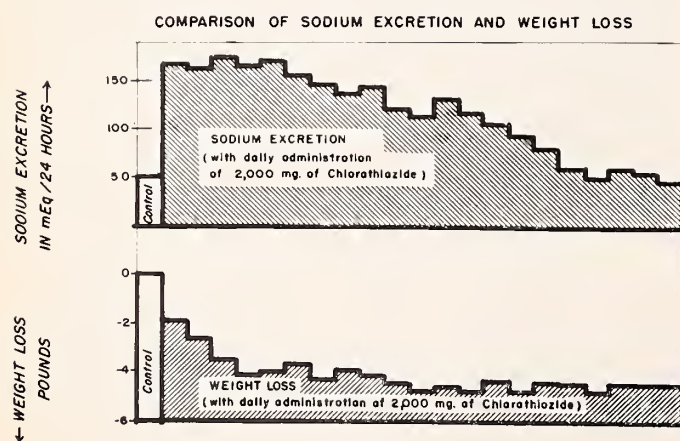


FIGURE IX

The effect of chlorothiazide on sodium excretion and weight in a patient with minimal edema. With daily administration of the drug, the maximum increase in sodium excretion occurred during the first three days. After a week there was a decreasing rate of excretion so that after two or three weeks, the sodium excretion rate approximated the intake. As this occurred the weight loss was maintained.

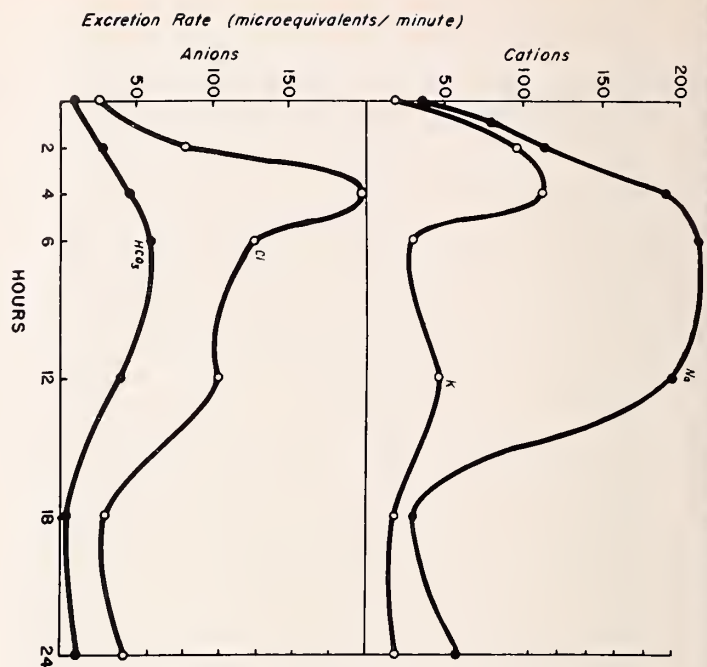


FIGURE X

Electrolyte excretion pattern as a response to chlorothiazide. The upright part of the graph indicates the increase in electrolytes where as the horizontal indicates the time factor in hours. The maximum effect was on sodium and chloride excretion and this occurred within the first six hours after drug administration. Within 18 hours the excretion rate had returned to the control value.

potency of chlorothiazide is compared with other diuretics, a dose of meralluride of one cc given parenterally produces an increase in sodium excretion which is about equal to 1,000 mg. of chlorothiazide.

The onset of action of chlorothiazide is prompt, indicating rapid absorption from the gastrointestinal tract. The action persists for about 12 hours (Figure 10) after oral administration. The response from divided doses is greater than an equivalent amount given as a single dose.

Recently it has been observed that chlorothiazide will enhance the response to anti-hypertensive agents. For example, when chlorothiazide is given in conjunction with any of the ganglionic blocking agents, the dose requirement of the blocking agent is reduced 50 per cent or more in about three quarters of the patients (Figure 11). The mechanism whereby this is accomplished is not completely understood. However, similar effects, although not as pronounced, are also observed with other diuretic and natriuretic agents such as chlormerodrin (Neohydrin) when given in adequate doses continuously (Figure 12) along with specific anti-hypertensive agents which depress sympathetic nervous system activity. In the case of chlorothiazide, the natriuretic effect is persistent and the side effects with chlorothiazide are less marked than with the oral

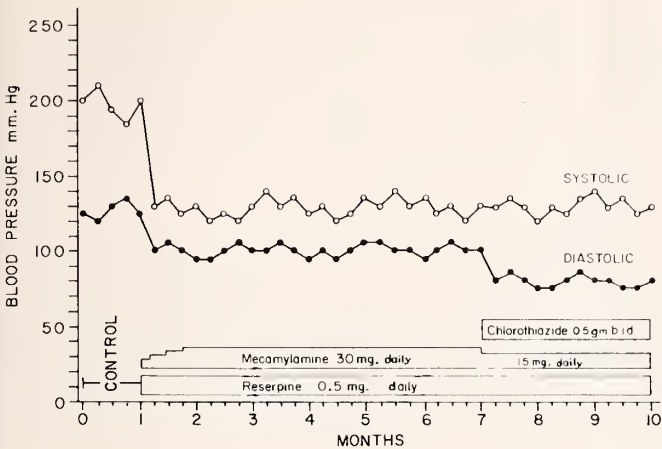


FIGURE XI

The effect of chlorothiazide on the dose requirement of a ganglionic blocking agent in a patient with hypertension. The requirement of mecamylamine decreased from 30 mgm. per day to 15 mgm. and at the lower dose level there was an even greater reduction in blood pressure.

mercurial diuretics. This makes it more feasible to use this agent on a long-term basis in conjunction with anti-hypertensive agents.

Newer Thiazide Derivatives:

The advance in diuretic therapy observed with chlorothiazide has stimulated the evaluation of other benzothiadiazine derivatives in an attempt to improve the potency and decrease the incidence of side effects. Figures 7 and 13 contain the structural formulae of two such derivatives which have been studied extensively. Trifluoromethyl thiazide (flumethiazide) * differs from chlorothiazide in that the chloride atom in the benzene ring is replaced by a trifluorinated methyl group. Hydrochlorothiazide** has the same structure as chlorothiazide except that two hydrogens have been added.

* Available from E. R. Squibb and Company.
** Available as Hydrodiuril from Merck Sharp and Dohme, Inc.

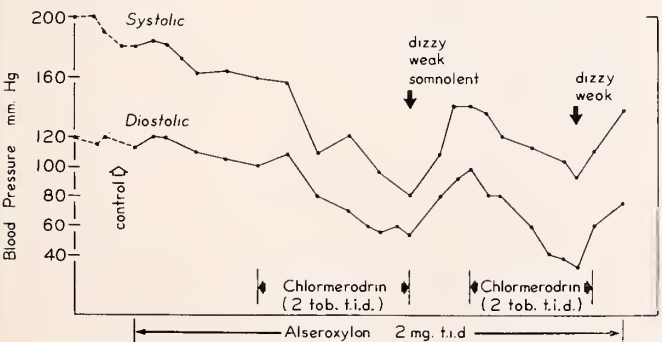
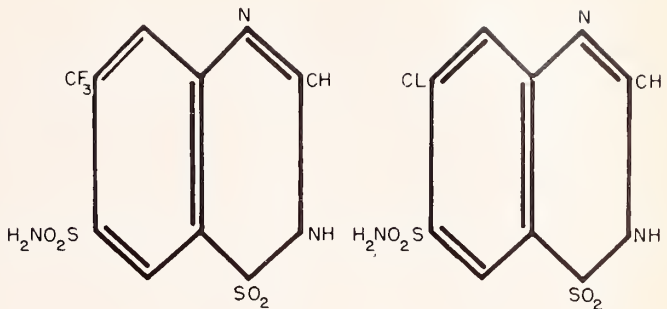


FIGURE XII

The effect of chlormerodrin on the blood pressure response to alseroxylon (Rauwiloid) in a patient with hypertension. The mercurial diuretic produced an additional reduction in blood pressure.



Trifluoromethylthiazide Chlorothiazide

FIGURE XIII

Structural formulae for flumethiazide and chlorothiazide.

Flumethiazide:

Dose response curves were determined by observing the acute weight response in 48 hours in a group of cardiac patients to increasing doses of the drug and in hospitalized patients by observing the increase in sodium excretion. In the Out-patient Clinic study, the patients were free of diuretic therapy between each dose of the drug for at least five days and were on maintenance digitalis therapy. A dose of 800 mg. twice a day had the same effect on weight response in this group of patients as did a dose of 500 mg. of chlorothiazide twice a day in the same group of patients. When 1,000 mg. was administered twice daily the effect was the same as 1,000 mg. of chlorothiazide given twice daily. Therefore, the maximum effective dose of both drugs is the same. Increasing doses above 1,000 mg. twice a day has no further increase in effectiveness, as occurs with the chlorothiazide. When the increase in sodium excretion was used to determine the dose response, the observations summarized in Figure 14 were obtained. This response is almost

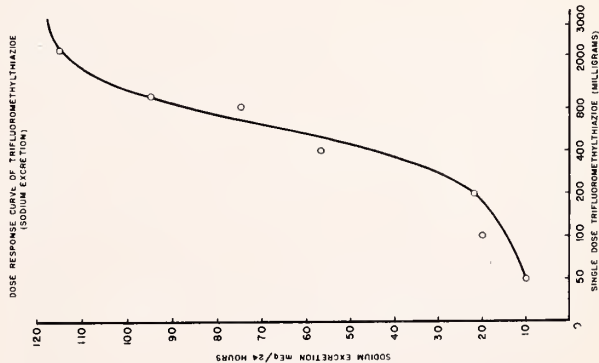


FIGURE XIV

Dose response curve to flumethiazide. The response was quite similar to that observed with chlorothiazide. The minimal effective dose appeared to be about 125 to 250 mgm/day. The maximal effective dose appeared to be approximately 2,000 mgm/day. Increasing the dose above this amount did not increase the sodium excretion.

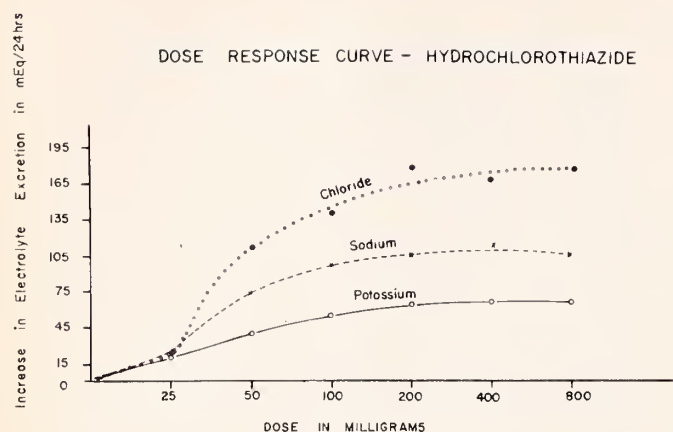


FIGURE XV

The dose response curve to hydrochlorothiazide. The minimal effective dose appeared to be 20-25 mgm. The maximal effective dose was 200 mgm/day. The primary effect was on chloride excretion with a lesser effect on sodium excretion. As with chlorothiazide there was a very definite increase in potassium excretion.

identical with a similar study made on chlorothiazide.

Hydrochlorothiazide:

In order to determine the degree of response of electrolyte excretion to various doses of hydrochlorothiazide, 18 patients were studied. The patients were given the drug for two days and 24 hour urines were collected for determination of increased sodium, potassium and chloride excretion above control levels as in the studies on flumethiazide and chlorothiazide. The average of the first 48 hours excretion was compared to the control. The patient was then allowed to equilibrate and replenish the sodium stores again without the drug. Increasing doses were administered after a period of equilibration was obtained for control sodium excretion. The doses used were 25 mg., 50 mg., 100 mg., 200 mg., 400 mg., 800 mg., per 24 hour period. The dose response curve is graphed in Figure 15. It is noted that natriuretic activity starts at 25 mg. level with a marked increase in electrolyte excretion at the 50 mg. dose levels. There is an increasing electrolyte excretion up to 200 mg. above which the increased electrolyte excretion response levels off. In the effective dose range potassium loss is approximately one half that of sodium and the most marked effect is on chloruresis which is greater than the natriuretic effect of hydrochlorothiazide. This response is different from the response seen to chlorothiazide and a mercurial diuretic (Figure 8) in which the sodium and chloride excretions are more nearly equal or the chloride excretion is less than sodium.

The response to a 400 mgm. daily single dose as compared to 200 mgm. given twice a day is seen in Figure 16. The initial natriuresis was somewhat greater when the 400 mgm. dose was given as com-

pared to the 200 mgm. dose. However, when the 200 mgm. dose was repeated 12 hours later, an additional natriuretic response was observed. The total 24 hour excretion rate of sodium was greater when the dose was divided and given every 12 hours.

TREATMENT

Heart Failure:

In patients with heart failure, digitalis and decreased physical activity are of primary importance. Only when these more simple measures prove to be inadequate are diuretics indicated. When cardiac failure is severe, exercise reduces the glomerular filtration still farther, which results in sodium and water retention. Since glomerular filtration rate is highest when the patient is supine at rest and decreases as the upright position is assumed, initially it is best to have these patients at rest in bed.

In using bed rest for the treatment of heart failure, this should be viewed as a temporary measure only since many secondary physiological alterations follow excessively prolonged rest in bed. But, restricted activity should be advised as a permanent measure. Once heart failure has developed, it is rare that cardiac function returns entirely to normal irrespective of the etiology of the disease or the therapeutic program applied. Moreover, the more frequently and more severely a patient decompensates the more difficult it is to improve the cardiac status to anything near normal. Consequently, the authors

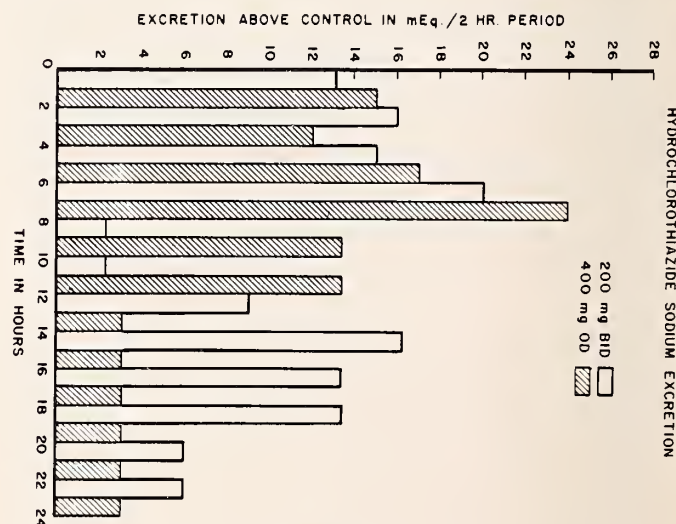


FIGURE XVI

The effect of hydrochlorothiazide on sodium excretion when given as a single dose of 400 mgm. in the morning as compared to the response to giving the same amount of drug in divided doses of 200 mgm. every 12 hours. There was a slightly greater increase in sodium excretion initially following the 400 mgm. dose but when the drug was given in the divided doses there was a secondary increase in sodium excretion following the second dose so that the total 24 hour excretion rate was greater when the drug was given in a divided dosage.

feel that it is preferable to use maximum therapy rather than take a chance of under-treatment. Many more patients develop severe and progressive heart failure from inadequate therapy than get into difficulty from the side effects associated with over treatment.

Sodium chloride intake should also be given primary consideration in many patients with edema. Usually water intake is of little importance so long as sodium intake is rigidly restricted. In fact, a large urinary volume will often times promote an increase in sodium excretion.

Generally, the more severe the heart failure the less salt can be excreted by the kidney. Thus, in a patient with mild heart failure, restriction of salt intake to three grams will be adequate. In moderately severe cases of heart failure, the salt intake should be restricted to less than 1.5 grams. In patients with severe heart failure, the salt intake should be restricted to less than 500 mg. of sodium. When effective diuretics are given continuously, the salt intake can usually be liberalized. For effective low salt diets the family and the patient should be instructed in the method and virtues of a low salt diet by someone adequately trained in this field. This cannot be emphasized too much since it is not enough for the physician to merely instruct the patient to "go on a low salt diet." All too often, patients will go for years without proper dietary instruction.

Diuretics can be used as follows:

1. Give a parenteral mercurial diuretic initially when heart failure is severe, e.g. Meralluride (Mercurhydrin) two cc. intramuscularly daily (or mercaptomerin (Thiomerin) two to three cc. daily) for three to five days until gross edema has disappeared. Chlorothiazide (Diuril) or flumethiazide (Ademol) can also be used in a dose of 1,000 mg. every eight to 12 hours or hydrochlorothiazide (Hydrodiuril) in a dose of 100 mg. every 12 hours. Subsequently the dose of chlorothiazide and flumethiazide should be decreased to the minimally effective dose but to no less than 250 mgm. every other day, of chlorothiazide and flumethiazide and 25 mg. of hydrochlorothiazide.

2. Oral diuretics such as Chlormerodrin (Neohydrin) four to eight tablets daily can be used for maintenance of the edema-free state if the response to chlorothiazide is not adequate. When heart failure is mild, compensation may also be maintained with acetazoleamide (Diamox) (250 mg.) or ethoxzolamide (Cardrase) (250 mg.) or aminoisometradine (Rolicton) (600 to 1,200 per day) given every other day or daily for three consecutive days out of each week. In moderate to severe heart failure, these compounds will rarely be adequate for maintenance therapy. Then chlorothiazide (Diuril) (500 to

1,000 mg. b.i.d.) or flumethiazide (Ademol) (500 to 1,000 mg. b.i.d.), or hydrochlorothiazide (Hydrodiuril) (50 to 100 mg. b.i.d.) or chlormerodrin (Neohydrin) (one to two tablets after each meal and at bedtime) must be used if the oral route of drug administration is to be employed. Otherwise, parenterally administered mercurial agents must be given in adequate doses (one to four cc.) and as frequently as necessary to maintain the edema free state. Diuretics used in this manner increase sodium and water excretion and thus decrease blood volume and venous return of blood to the heart. Right auricular filling pressure is thus reduced and cardiac output increases.

THE USE OF DIURETICS IN CONDITIONS OTHER THAN HEART FAILURE BUT IN WHICH CONDITIONS SODIUM AND WATER RETENTION IS A PROBLEM

Treatment of Premenstrual Edema:

The desired effect is to decrease sodium and water retention. Edema is not marked in this disease entity. A suggested outline of therapy is as follows:

1. On last five to seven days of the menstrual cycle:
 - a. Low sodium diet.
 - b. Chlorothiazide (Diuril) or flumethiazide (Ademol) in a dose of 500 mg. twice a day or hydrochlorothiazide (Hydrodiuril) 50 to 100 mg. daily, or acetazoleamide (Diamox) 250 mg., (one tablet) or ethoxzolamide (Cardrase) 125 mg. (one tablet) daily.

Treatment of Edema of Pregnancy:

The desired effect is to decrease sodium and water retention. Since pre-existing disease may be responsible for edema in this entity, a close medical survey must be completed. When no obvious causes of edema are found, then therapy may be summarized as follows:

1. At first sign of edema; low sodium diet.
2. If not controlled by diet; Chlorothiazide* 500 to 1,000 mg. twice a day or acetazoleamide (Diamox) 250 mg. or ethoxzolamide (Cardrase) 125 mg. may be given every other day if edema is not marked.

Edema Associated with Renal Disease:

Multiple factors are operative in this entity and include excessive urinary protein loss, decreased glomerular filtration, and increased tubular reabsorption of sodium. The treatment may be summarized as follows:

1. Bed rest.
2. Low sodium diet.

* Flumethiazide and hydrochlorothiazide can probably be used here but this has not been settled by the authors.

3. Chlorothiazide (Diuril) or flumethiazide (Ademol) —500 to 1,000 mg. b.i.d. or hydrochlorothiazide (Hydrodiuril) 50 to 100 mg. b.i.d.
4. If first three therapeutic procedures do not control edema in one week, a seven day trial of ACTH administered as 25 units in 1,000 cc. of five per cent dextrose in water intravenously over an eight hour period daily or as "gel" 40 units intramuscularly every 12 hours, may be tried. Or prednisone 10 mg. every six hours for four doses, then five mg. every six hours for eight doses, then five mg. every 12 hours for eight doses. Diuresis usually occurs as the steroid (or ACTH) therapy is withdrawn. The mechanism is poorly understood. We have noted that maximum diuresis can be obtained when chlorothiazide or hydrochlorothiazide is started just as the steroid is withdrawn. For this purpose 500 to 1,000 mgm. of chlorothiazide should be given every eight to 12 hours. The drug should be started on the last day of steroid administration and continued thereafter as long as the diuretic and natriuretic effect is desired.
5. If no response to above, administer 100 grams of salt-poor human albumin intravenously every other day. This is an expensive procedure.
6. Finally parenteral mercurials (Meralluride one to two cc. daily) may be tried when edema is severe and unresponsive to the measures outlined previously.

The Use of Diuretics in Hepatic Disease:

Since the edema usually is associated with inadequate protein formation followed by a reduction in blood osmotic pressure, the underlying liver disease should be attacked therapeutically. However, other factors such as decreased hepatic inactivation of salt retaining steroids may be treated by agents acting to block the renal tubular reabsorption of sodium. Thus, treatment for edema or ascites may be outlined as follows:

1. Low sodium diet and decreased physical activity.
2. In presence of significant hypoalbuminemia (serum albumin less than three gms.) give a

high protein diet and may use salt-poor albumin giving 100 gms. intravenously every other day to achieve diuresis. The expense may be a contraindication here.

3. Increase sodium and water excretion by giving Meralluride (Mercuhydrin) two cc. intramuscularly daily as needed to control massive edema.
4. If response to meralluride is not adequate give Chlorothiazide (Diuril) or flumethiazide (Ademol) 500 to 1,000 mg. every eight hours or hydrochlorothiazide (Hydrodiuril) 100 to 200 every 12 hours.
5. After massive edema is controlled, maintenance may be had with chlorothiazide (Diuril) or flumethiazide (Ademol) 500 to 1,500 mg. daily by mouth or hydrochlorothiazide (Hydrodiuril) 50 to 200 mgm. daily. Use the smallest effective dose.

The Treatment of Iatrogenic Edema:

When sodium retention and edema become a problem it is preferable to discontinue the steroid but this is not always possible. In this case, the edema can usually be treated by daily and continuous administration of chlorothiazide (Diuril) * in a dose of 500 to 1,000 mg. every eight hours, or chlormerodrin (Neohydrin) in a dose of two tablets four times a day. When these agents are not adequate when given alone, then they should be given in combination.

Parenteral meralluride (Mercuhydrin) is also effective but when used for this purpose it must be given every 12 hours since the maximum increase in sodium excretion occurs during this period. During the subsequent 12 hour period (when the drug is not given again) there is actually retention of sodium.

SUMMARY

In varying degrees of importance, natriuretic (or diuretic) agents are a therapeutic common denominator for the treatment of numerous syndromes associated with excessive sodium and water retention.

* Flumethiazide and hydrochlorothiazide are probably also effective but have not been studied by the authors for this indication.

Opinion Survey And Relative Value Study

The following two articles are reprinted from the Journal of the Michigan State Medical Society (June, 1959). Their publication in "Connecticut Medicine" marks the beginning of a series of educational commentaries designed to provide members of the Society with background material which, it is hoped, may be of value to them in responding to the forthcoming "Opinion Survey" and "Relative Value Study" questionnaires.

WRR

The Norm Is Shocking!*

President's Message

GILBERT B. SALTONSTALL

President, Michigan State Medical Society

For twenty years, Michigan Medical Service has been a very real part of medicine in Michigan. During that time, hundreds of millions of dollars have been paid by the people of Michigan to MMS and it has in turn paid the doctors for the care they have rendered to their millions of patients.

It sounds easy. But the process described above has required millions of man hours, millions of pieces of paper, and millions of opportunities for trouble.

These latter millions are compounded when changes are made . . . and we have seen constant change since the inauguration of Blue Shield.

Frankly, we have been lucky in Michigan, for it comes as something of a shock to all of us when there appears a major divergence of opinion among our members on matters relating to Michigan

Medical Service. It just hasn't happened here for many, many years even though it is a normal situation in some other states. These differences of opinion are bound to arise when many different people are affected in many different ways by every policy adopted and every policy change.

But the important thing is this: Everybody is really after the same thing—Good Medical Care at Reasonable Cost. And as long as the control of the situation lies in the hands of members of MSMS, we can be reasonably confident that that goal is not going to be lost sight of, as we engage in a little tugging and hauling to determine the ways and means of arriving there.

It is mighty important that we can have such confidence, for if *we* lose sight of the goal—*everybody* loses.

The Physician Views Financing Of Hospital And Medical Care*

MAX LICHTER, M.D.†

Detroit, Michigan

THE problems in planning prepayment medical care programs faced by physicians are manifold and quite complex. I do not think that I know all of the problems, nor can I say I understand all of those of which I am aware. The problems would appear to fall into two main areas:

1. Those which arise out of an understanding of what needs to be done, with recognition that practical measures can be developed to achieve a solution.
2. Those which arise out of a firm conviction

that there are deeply rooted traditional relationships which are not readily amendable to change.

It would appear at first glance that there is a degree of incompatibility between these two major areas which I have mentioned. While the two views may seem irreconcilable, both can be united in a single area of understanding. You will find few physicians who disagree with the philosophy and even the necessity of pre-payment in medical care. There will be disagreement in the method of implementation, however.

It must be remembered that the practice of medicine, which can be regarded as an Art, is something which is personal and intimate. Because it is so very basic, the relationship that exists between a

* Reprinted from the June 1959 issue of the Journal of the Michigan State Medical Society with permission of the editor and the authors.

† Dr. Lichter is chairman, Medical Care Insurance Committee of the Michigan State Medical Society.

patient and his physician can never be minimized or dismissed as inconsequential. In the final analysis, the patient deals face to face and alone with his physician; and the physician deals with one patient at a time—singly. As you well know, this condition has legal and moral and ethical status. On the other hand, this transcendent relationship should not be used by some physicians as a major and overriding reason for not favoring or encouraging the development of methods to make medical care more available from a financial standpoint. Therefore, any planning must bear in mind the legitimate feelings of physicians in their sincere desire to keep the practice of medicine the personal Art which it is.

The practice of medicine being what it is, not solely a scientific and objective pursuit, is inherently inefficient when measured by economic standards. While patients' problems may fall into very broad categories, there are many niches within each category which defy precise measurement. A symptom does not always mean a specific illness or disease. Take for example a pain in the epigastrium. It could mean an ulcer, gastritis, gall stones, pancreatitis, retroperitoneal tumor, worry, anxiety, anger, or overindulgence. There is no single simple way to determine what is producing this simple symptom. Within the limitation of practicality no minimal set method of testing could pinpoint the cause, though it might indicate a possibility. But even if a simple set of testing procedures could be devised there is one ingredient that could not be mixed into the "batter," and that is a physician's judgment, which is achieved by his knowledge, experience and interest. Any medical care planning which negates this premise is adding to the problem rather than dealing with it.

ECONOMICS CANNOT BE OVERLOOKED

One might say that an ideal situation would be one in which the physician keeps himself completely detached from the financial side of medicine while he is rendering the highly-motivated service which only he can offer. While this viewpoint is idealistic there is certain weakness in the position. Generally speaking, all physicians are dedicated within their capabilities to their profession. However, it must be remembered that fundamentally physicians are human beings having the same ambitions and aspirations all people have, the same desires for status and position, and subject to the same impact of our ever changing socioeconomic culture. The plain fact is that physicians want security, homes, families, the good things of life, all of which come from hard work and human striving. The degree to which they achieve these cannot be answered solely by outside forces.

What must result is that physicians should be

left free to deal with the professional aspects of medicine. But there must be inherent in any planning a stabilization of the economic aspect of the practice of medicine. This can be done by physicians. Both of these major points will work in the interests of the patient and of his physician.

Prepayment for medical care is still relatively new. It is an approach which is still in its evolutionary development. By no means has there been a solution to this worthwhile project. Certainly the very rapid growth, as measured in terms of tremendously increasing enrollment in plans, thoroughly reflects the value the public places on medical services. Further indicated is the great interest on the part of the public in being able to meet the cost of medical care services when they are needed. We are still groping for answers, methods, and, most important, for understanding. If we keep this clearly in mind then problems can be faced in a cooperative effort to resolve them. This can only lead in a dynamic sense to an ever-improving program.

EACH IS IMPORTANT

In terms of a cooperative approach, it can be recognized that medicine, management, labor—all interested in the welfare of the consumer of medical care—each have their important role to play. Management, as a community force, contributes greatly to the financing and purchase of medical care, and should therefore be conceded a legitimate interest in medical care planning. Labor should be recognized as a community force representing the consumer's interest and having a legitimate role in planning.

In the triad—administration, financial, professional—of medical care plan functioning, it should be accepted that management and labor have a proper role in administration and finance. However, they cannot intrude themselves into the professional side of medical care plan operation. This should, in a cooperative sense, be left exclusively to the medical profession. Certainly, the desires of the consumer should be carefully considered by physicians in this regard. It should be pointed out that what may be desired and what may be necessary are not always related and should be subjected to the test of what is practicable.

Only physicians have the necessary understanding of what really is the practice of medicine and what really constitutes the needs of patients in terms of medical care. I do not mean that physicians should be dogmatic in this position, but, after sincere cooperative discussion, the final decision in such matters should be left to them. This would require a considerable degree of interest upon the part of physicians in the matters of administration and financing the cost of medical care. I am sure you will agree that physicians are capable of such

understanding and would, in an atmosphere of co-operative discussion, consider the judgment of those better qualified in these areas than themselves.

One of the major problems facing physicians in the financing of medical care is their fear that their freedom might be compromised. Some of this cannot be regarded as being unfounded. For example, there is strong advocacy for changing the method by which medical care will be furnished. The physician will not be recognized as an individual entrepreneur, but rather as a cog in an automated machine. Any planning which is disruptive in its character can only be achieved by disruptive means. This must be avoided in the interest of cooperative solution of problems.

THE QUESTION OF "QUALITY"

Another factor in the physician's uneasiness is the seeming impugning of his ability to furnish good medical care. So much has been said about "the quality of medical care." This is something which is very difficult to understand, because we cannot perceive any precise method of measuring this in terms of any new system of financing medical care. We know that physicians always strive to keep abreast of the technologic advances in medicine and to improve their understanding of the problems of people. We of medicine, by our own volition, without any coercion by medical care plans, have developed methods of individually and collectively improving our abilities. I am sure that all of you are familiar with the Joint Accreditation Commission and the wonderful strides it has made since its inception a few years ago. As one contemplates its objectives and progress there need be no fear that the equality of medical care will not be a concern of the medical profession. This intangible "quality" is measured by the inward feeling of immense satisfaction that an individual physician experiences when he knows that he has done his job well. How does one measure the sense of satisfaction a patient has with his medical care? Isn't this an important factor to be considered in equating "quality"? Since it is so intangible a thing, "quality of medical care" will probably defy precise measurements.

There may be isolated instances where poor medical care is furnished by individuals. These are obvious to anyone. But they can be dealt with by physicians. You cannot indict an entire profession on the basis of transgression by a relative few. I would point out that we think no less of the worthiness of the labor movement, because of a mere handful of rascals in its ranks. Defectors in industry do not bring wide calumny on the heads of management because we hear of an occasional sinner.

A LOOK AT THE RECORD

Statistics can demonstrate the effect of improved medical techniques and practices on such things as infant and maternal mortality, morbidity and mortality rates, and on increased longevity. This was accomplished before the financing of medical care became so widespread and has continued through the infancy and even in the face of opposition to such planning. Such steady improvement will continue regardless of any impetus by, or the ultimate role of the pre-payment of medical care. It comes about only by the dedication and motivation of a profession.

Another thing in this connection that may confuse physicians is, if they are deficient in rendering quality medical care now, how would a new method of furnishing medical care improve the situation since the same physicians, produced by the same medical educational system, taking care of the same patients, would be needed to furnish the medical care in a changed system. No, it isn't schemes for providing medical care that affect the quality of that care; it is physicians who, under any circumstances, affect the quality of medical care.

Another problem that concerns us is the seemingly overweening preoccupation with the cost of medical care. As a matter of fact, we should admit that this is really the major reason why the financing of medical care concerns all of us. This is a valid factor which deserves a lot of consideration. But when it is used as a major argument to criticize a profession and to imply that we are "out to get all we can" a natural sense of resentment arises. And the same feeling arises when cost furnishes the main reason for changing the way medical care is provided.

I would like to know just what is proper cost in financing medical care? To what do we relate cost? What is our bench mark? Or to put it another way, what is the point we must reach where cost is not a factor? When these questions are answered we then might understand what our critics are talking about.

We know that the total cost of medical care has been rising, but you are aware that physicians' fees have not increased proportionate to other services in our economy. It seems a bit paradoxical that prepaid medical care coverage was devised to enable people to avail themselves of more and more medical care; and yet when people do this which they have been encouraged to do, and physicians thereby are rendering more and more service to patients, we find ourselves charged with being responsible for the increase in these costs. We find it strange that in view of the enormous advances in medical technology which have been so great a

boon to mankind we are charged with responsibility of increasing medical costs.

I would say that medicine can contribute much to the solution of problems if we can dispense with rationalizations. The least change in medical practice and the greatest amount of service to the public should be a major objective of planning. I am sure that medicine is willing to recognize the role of other interested groups provided these groups are willing to recognize the role of medicine. Cooperation and cooperative discussions will bear fruit if they are nurtured in an atmosphere of sincerity.

LEADERSHIP HAS ARISEN

Medicine can provide leadership of a reasonable character which will prove valuable in dealing with problems. There is ample evidence that once again this is occurring. Leadership arises, always, when it is needed. It must not be thought that "it is too late." Nothing is ever "too late" when its awakening is for the common good. This leadership can interpret to both the public and the profession the problems and solutions in the financing of medical care. The profession would maintain an awareness of the changes occurring in our economic climate, as an important part of it, but not as the cause requiring the changes. Within the frame work of its basic philosophy, medicine can adapt to the changes in our culture.

In Michigan we have resumed in the last two years our role of leadership. As you know, we have developed a "Statement of Principles" which state what we feel the people of Michigan are entitled to; the commitments we, as an organized group of doctors, will make in support of our Principles; the benefits we insist must be incorporated in any acceptable pre-payment plan. In our Principles we insist that all matters pertaining to the professional side of the practice of medicine must be left in the hands of physicians. We have a means prescribed for the review of the actions of our members in relation to the implementation of the program. We have provided a means by which the public, as well as insurance carriers, can come to the Michigan State Medical Society with any problems which may perturb them. We offer to any insurance carrier or plan which will abide by our Principles the endorsement of the Michigan State Medical Society.

We recognize that one of the most important responsibilities of the Michigan State Medical Society is that of communicating with its members. To that end in 1958 there was conducted a rather in-

tensive professional relations program carried out by the PR staff of the Society. Prior to that a great number of meetings were held in each of the Councillor districts of our State and, in addition, many explanatory meetings with hospital medical staffs. In addition, quarterly reports of activities in this field are prepared and distributed to each member and alternate of the House of Delegates, the legislative body of the Michigan State Medical Society. We realize that much more needs to be done on a continuing basis.

MEDICINE'S RIGHTFUL ROLE

I can tell you that the members of our state society are more aware than ever before of pre-paid medical care insurance. There has been a certain amount of opposition based chiefly on some of the factors I have enumerated. There may be other reasons, but they are a bit too abstract to discuss at this time. However, I feel that this opposition is good, because it keeps the subject before the eyes and ears of our members, and because it improves and deepens our thinking on this very important subject.

Medicine should not be placed in a position where it feels it must meet threats and therefore must be defensive. It must be assigned, and accept a leading role in coping with the problems involved in the development of acceptable means for financing medical care. Medicine should not be made to feel that it is a whipping boy for consumer representatives on one hand and the problems faced by hospitals on the other. Medicine should not be made to feel that it is being dictated to or negotiated with; it should be made to feel that it is a full and leading partner whose wise counsel should be sought. We should not be made to feel that the method by which professional services has been furnished over a great many years is no longer any good. Rather, means should be developed for continuing the private practice of medicine as a very worthy and personal thing.

I would say that we intend to maintain our Principles, recognizing them as an instrument capable of flexibility and therefore subject to change in the best interest of our patients and of physicians. We intend being temperate and interested in obtaining cooperation. I feel that our "Statement of Principles" represents a summation of our experience and understanding developed in the past twenty years. We have learned much but we recognize that there is much more to be learned. We feel that we have made important strides.

FROM THE SECRETARY'S OFFICE

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CMS-CSMS Joint Liaison Meeting

For the first time since the CMS annual elections in February, 1959, a joint meeting of the CMS Liaison Committee and the CSMS Council Liaison Sub-committee was held on Thursday, July 23, 1959 at 160 St. Ronan Street, New Haven, Connecticut.

Representing Connecticut Medical Service, Inc.

Messrs. Judd, Doolittle, Coolidge, Cronin and Drs. Russell, Middlebrook, Archambault, Dean, Blodinger.

Others: Dr. Horton, Mr. Jordan.

Absent: Mr. Gumbart

Representing the Connecticut State Medical Society

Drs. Buckley, Davis, Gallivan, Feeney, Eddy, Weise, Cullen.

Others: Dr. Richards

Absent: None

The meeting was called to order at approximately 3:30 P.M. by Dr. Feeney, the Chairman of the Council, who presided.

After a general discussion, it was agreed that subsequent meetings will be held on the basis that the Society and CMS will act as host alternately. It was further agreed that the host organization will designate the chairman for each meeting. It was also felt that in order to provide the most useful and complete agendas possible, Dr. Horton and Dr. Richards should cooperate in the preparation of the agendas and provide supporting materials for each item as far in advance of meetings as possible. It was decided that formal minutes of these meetings should be kept by a "secretary" who shall be regularly designated by the host organization.

The following matters were considered at this meeting:

1. "THE STORY OF CMS"

The CMS organization is in the process of preparing a film, tentatively entitled "The Story of CMS" which they hope will be of informational and educational value to all members of the Society. One of its primary functions will be to present to Connecticut physicians some of the important present-day medical economic problems in the solutions of which CMS hopes to enlist the cooperation of physicians.

When the Council viewed a preliminary version

of this film several months ago, several apparent inaccuracies were noted and, as an action of the Joint Liaison group, it was VOTED that representatives from CMS and the Society should revise the script in such a manner as to eliminate the inaccuracies and to generally improve the film as a professional relations mechanism. It is understood that the revised script will be reconsidered jointly at the next liaison meeting.

2. DETERMINATION OF MEDIAN FAMILY INCOME IN CONNECTICUT

It is apparent that in the development of any new CMS contract, the determination of individual and family income levels for Service Benefits will be an important consideration, mutually agreeable to CMS on an actuarial basis and to members of the Society as present or future Participating Physicians. The CMS Board presented a possible mechanism or formula for the determination of the median family income in Connecticut. Since the document had been received too late to give it proper study, it was decided that the matter should be placed on the agenda of the next meeting for more complete discussion and evaluation.

3. PHYSICIAN OPINION SURVEY

Dr. Middlebrook, CMS President, requested that at such time as the plans for conducting an opinion survey by the Society have reached final stages of development, the proposed questionnaire be placed on the agenda of a future liaison meeting. It was agreed that this would be done.

Various members of the Society reported on the regional conference on Relative Value Studies which was held in Boston on July 18, 1959. Dr. Horton presented his views as to the possible effects on CMS which might result from the adoption of a relative value scale by the Society. It became evident from these discussions that there will be a need for an intensive informational and educational campaign in order to prepare physicians for the very important function of responding to the questionnaires.

4. A Statement Of The Basic Principles Of CMS—1959

A series of eleven paragraphs outlining the present basic principles of CMS was presented for consideration. These principles were adopted by

the Executive Committee of the CMS Board on July 16, 1959. Points of clarification were presented by members of the Council's liaison sub-committee.

Subsequent to the meeting, copies of these "Basic Principles," amended as suggested by members of the Society, were submitted to the Executive Secretary, having been adopted unanimously by the CMS Executive Committee. It is planned to include this "1959 Statement of Basic Principles" in the film referred to in Paragraph 1. Although members of the Council's Liaison Sub-committee did not take any official action on this document, there was general agreement that the principles were stated clearly and forthrightly and should be given prominent display in CONNECTICUT MEDICINE so that every member of the Society would have an opportunity to become familiar with them. This "Statement of the Basic Principles of CMS-1959" appears on the opposite page of this issue.

5. THE FORAND BILL

Dr. Feeney called on Dr. Weise, President of the Society, to report on his experiences in Washington at the Forand Bill hearings. Dr. Weise gave the general nature of the testimony offered by a variety of speakers, both in support of, and in opposition to, the Forand Bill. He also described actions of the Society and of himself, taken to reply to certain public statements which had appeared in the press, attributed to various members of the State Commission on Services to Elderly Persons. Dr. Weise's report was received as information.

The next meeting will be held on Thursday, September 10, 1959 at the CMS Building, 221 Whitney Avenue, New Haven, Connecticut at 3:30 P.M.

WILLIAM R. RICHARDS, M.D.

New Haven County Medical Association Polio Action

In response to a request of the Committee on Public Health, which was made to all County Medical Associations several months ago, the Board of Governors of the New Haven County Medical Association took what appears to be a very wise action in appointing a committee to work with county and local health directors in surveying the problems of polio immunization as it exists in local areas and in developing satisfactory programs to meet the local situation.

Reaffirming their belief that "the family physician is the most satisfactory agent to provide these essential immunizations," the Board of Governors directed that the committee offer two recommendations to health directors stressing that in *neither* case would participating physicians accept payment for their services.

- (1) To have members of the New Haven County Medical Association participate in "free" clinics conducted for those on whom the cost of vaccination might impose financial hardship.
- (2) To have members of the Association participate in "pay" clinics, to which people in all income groups might be attracted, provided that it be made clear that participating physicians are serving without payment and that any proceeds over and above actual costs would be donated to the American Medical Education Foundation.

It is believed that this approach to the matter of polio immunizations is working out well and that other counties which may be establishing similar committees might wish to follow this pattern.

Relative Value Study

This Committee is gradually becoming oriented as to the complex nature of its task. Standard nomenclature of medical services is the first problem to be met. Members will confer often with their colleagues in the types of practice they represent, as well as with "sub-specialties" which do not have direct representation on the committee.

At the recent Regional Conference on Relative Value Studies, held in Boston, over thirty members of the Society were present and felt that the proceedings there were most interesting and informative.

WRR

Opinion Survey

This sub-committee (Dr. Richards, Chairman, Norman Gardner, East Hampton, Denis O'Connor, New Haven, Philip M. Cornwell, Hartford, David Grendon, Sharon and Ellwood C. Weise, Sr., Bridgeport as Special Consultant) has had two meetings thus far and it is felt that sound progress is being made toward the development of a questionnaire. Members of the Third Party Payments Committee have been regular participants (Max Alpert, Bridgeport, Chairman and Frank Abbot, Waterbury, Max Caplan, Meriden, Francis Gallo, Winsted, Charles Polivy, Hartford) and are rendering valuable service to the project.

Connecticut physicians are urged to discuss the Survey with these representatives and to make suggestions as to what opinions they would like to have determined with respect to the economic problems, administration, supervision, philosophy, medical policy and payment schedules of medical care prepayment and insurance plans.

WRR

A Statement Of The Basic Principles Of CMS-1959

- 1) CMS: Is a voluntary, non-profit corporation, organized under Connecticut law and supervised by the Commissioner of Insurance.
- 2) CMS: Is directed in its operation by a Board of Directors, all members of which serve without remuneration. The Board assumes responsibility for the Plan's operation. One half of its members are doctors of medicine, nominated by the Connecticut State Medical Society; the other half of the Board members are public-minded laymen, nominated by the Corporators of CMS, who give broad representation to the people of Connecticut.
- 3) CMS: Is a voluntary medical care plan (Blue Shield), the purpose of which is to provide Connecticut people with the opportunity to help pre-pay for certain services of doctors of medicine when those services may be needed.
- 4) CMS: Is operated as a public service agency and works closely and cooperatively with the medical profession of Connecticut to achieve the Plan's aims.
- 5) CMS: Shares the declared aims of the Connecticut State Medical Society in promoting the development of prepayment plans for all individuals, including those over 65 years of age, at a reasonable premium cost.
- 6) CMS: Is sponsored by the Connecticut State Medical Society which, through approved representatives, advises with the Board of Directors in matters of medical policy.
- 7) CMS: Through acceptance by Participating Physicians of a reduced fee schedule, has been able to provide full payment for physicians' services to CMS subscribers whose family income falls within certain stated limits (Service Benefits).
- 8) CMS: Also provides in its contracts for indemnity payments on behalf of those subscribers who do not qualify for Service Benefits on the basis of family income.
- 9) CMS: Assures free choice of physician to all subscribers and protects the traditional patient-doctor relationship.
- 10) CMS: Strives constantly to improve and extend its services to the Connecticut public under equitable contracts which are actuarially sound and mutually satisfactory to the subscriber and his physician.
- 11) CMS: Maintains reserves to insure payment of future benefits to its subscribers.

Adopted by the Executive Committee of the Board of Directors on July 16, 1959, and amended by the Joint Liaison Committees of the Council of the Connecticut State Medical Society and CMS on July 23, 1959.

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Vast And Wide Is The World

Should you go to Venice, that Byzantine *grande dame* who languorously reclines on the green mirror of the Adriatic amusing herself watching the black, swanlike gondolas glide by, visit the Ca'Pollo. Stop a moment before this mansion, which is now but a pale remembrance of History, and let your thoughts wander to the daring Venetian lad who in the thirteenth century crossed Trebizond, Mosul, Baghdad, Persia, the salt deserts of Kerman, the frozen "Roof of the World" at The Pamirs, the jade-encrusted lands of Kashgar, the mysterious Gobi Desert, forever lashed by the demons of the wind, the Mongolian steppes, fabulous Cathay, and finally reached the vast empires of the Great Khan. Sixteen years later, Marco Polo returned to his native land. But not for long. He set out once again and roamed Tibet, Afghanistan, Burma, Siam, Sumatra, Ceylon, and India. His twenty-seven years of travel, captured like many-hued butterflies in his book *Il Miglione*, joined in one great, fabulous adventure the sophisticated Venice of Dante with the exotic lands of Asia.

Marco Polo not only became a prince of merchants, papal envoy, governor of a Chinese city, favorite of Kublai Khan, master of exotic languages, war correspondent, and the first traveler-writer, but his book, the most romantic travel epic in History, established the first bond between East and West. In his great cavalcade, Marco Polo integrated Geography and History. His footprints across the vast Asiatic sands still endure on the sands of Time.

Jet planes today make Marco Polo's trip appear slow and erratic. Yet, few books convey as powerful a sensation as Marco Polo's does of the immensity of the world, of the importance of geography in the creation of History, and of the vital role of space in the march of events through Time. In our profession, which requires most of us to travel often, if only to call on patients, it is vitally important to remember that Geography can greatly increase our knowledge of Medicine.

Geography is neither the nacreous cloud puffs that float beyond the windows of the zooming stratocruiser nor the telegraph poles that rush to meet us on both sides of our speeding car. That is merely *space*, across which we speed in an attempt to overcome the tyranny of Time. Geography is the land, its climate, its wealth and poverty—it is all that contributes to the creation of the landscape, where man works, loves, fights, dreams, and dies. It is also the environment where man enjoys health or suffers disease, which is

always influenced by environment. For, let us never forget the words of the Renaissance humanist, Jean Fernel: "Geography is to history what anatomy is to medicine." Geography, in other words, is the anatomy of History, just as anatomy is the Geography of Medicine.

Classical physicians, from kind Hippocrates to restless Paracelsus, searched for the secret of disease in the air, waters, and earth. But the invention in our time of "portable" pocket climates has resulted in the relegation of the study of environment to the medical geographer, whereas in reality everyone should be something of an ecologist to be able to understand better our own mental texture as well as the changes in the organic fabric of our patients.

Geography often determines the character of peoples. Coastal, plain, and mountain peoples all have different characteristics traceable to their environment. One can better understand Paracelsus' mystic thought and misty language if one remembers that his youth was spent amid the shivering pines and the fog shrouds of Switzerland, and one can better comprehend Avicenna's mental jumps from objective science to sheer fantasy if one recalls the sharp changes from cold to hot in the desert where he lived.

Having a wide vision of the world has given many a humanist—from Luis Vives to Henry Sigerist—the universality of his thought. But when life denies a man who craves universality the opportunity to fulfill his craving "horizontally," by traveling through space, he then seeks fulfillment "vertically," withdrawing into his own spiritual self and drinking from his own inner fountain.

All physicians should travel as much as possible, and always with curious, loving, wonder-filled eyes. For to know the environments and geographies of the world we live in is the best way not only to understand health and sickness in man, but also to explore the mysterious geography of our own soul.

Félix Martí-Ibáñez, M.D.

The Epic Of Medicine

It is now two years since we undertook the quixotic task of integrating within the pages of the *News magazine MD* the three spheres of life—professional, social, and human—and the three personalities—physician, citizen, and man—of the physician, and thus attempted to help him to attain that plenitude which is attained only when man renounces to nothing in life. Thanks to our colleagues' constant support and encouragement, *MD*,

more than a magazine, is today a magic carpet on which the physician may soar through the blue skies of the spirit.

Our only compass has been our desire to make *living* medical history by looking with eyes filled with love and wonder at the world and age in which we live, our place in space and our point in time, and by applying to both minor and major events in Medicine and in life the delicate instrument of History—History, without which nothing has any real meaning. For only History can help man to understand the present and improve the future.

These have been two years of unremitting effort and rewarding harvest. Each month we have erected a complex editorial scaffolding from which, with words and pictures and a drop of common sense—the least common of the senses—we have tried to paint a mural of the ideas, men, events, and things of the world we live in, a mural true and realistic, but also warm and colorful, for we prefer the fresh flowers that gracefully lift their perfumed heads in a garden to the faded pressed flowers in a rare herbarium.

Like a mountaineer on the ascent, issue by issue, *MD* has broadened its range of vision. We have also sought to dig deeper into the core of things and the essence of man. In enveloping the physician's work in the rich fabric of History, we have turned History—which is remembrance—into a dynamic instrument for the conquest of the future—which is hope.

A magazine's life, like that of a human being, must move forward, must continuously project toward the future, must keep on making new plans. Hence, in this third year of its life, *MD* will launch a new project, inspired by my forthcoming book *The Fabric of Medicine*, a monumental triptych on the History of Medicine, consisting of *The Epic of Medicine*, *The Physician's Saga*, and *The Patient's Progress*, which for the first time will present the History of Medicine dramatized by means of all the resources offered by the modern graphic arts. Thus we shall open a new picture window not on space but on time.

History is above all pageantry. With all the pomp and glory of pageantry, *The Epic of Medicine* will present the History of Medicine as craft, art, and science, relating it to the history of civilization, of the arts, and of science and technology. A series of living tapestries will portray the joys and miseries of physicians throughout History. Colored *tableaux vivants*, romantic yet realistic, will revive great moments in medical history and the lives of great medical figures. Men, ideas, events, and places of memorable import in the story of Medicine will be resurrected. Like multicolored

lamps, words and pictures will light up the still dark corners of the healing art. Like rainbow lamps, they will conjure a great festival of the medical spirit in the multisplendored garden of History.

Pen, brush, and camera will take us on a safari across medical history's wonderland. They will show us the great medical shrines and landmarks that the centuries have failed to destroy: Hippocrates' plane tree on the sunny isle of Cos, the ancient walls of Byzantium, Avicenna's tomb in Persia, Boerhaave's house, the golden vineyards where Claude Bernard lived; and they will reconstruct for us in all their splendor those landmarks that have long been gone, thus uniting past and present and restoring flesh and soul to what, in our mind's eye, are only things of mist and smoke.

The Epic of Medicine will relate the first awakening of medical consciousness in the magic-governed shamans of the primitive world; the fight between sorcerer-physicians and the demons of disease in Mesopotamia and Egypt; the ceaseless spinning of subtle philosophies by philosopher-physicians amidst the harmonious geometry of white marbles in ancient Greece; the practice of Medicine by slave-physicians in bureaucratic, militaristic Imperial Rome; the compilation of monumental medical works by physicians in walled-in Byzantium, who thus sought to escape their cloistered world, just as the Byzantine artist sought escape through the magic windows of multicolored miniatures and the stained glass windows of basilicas; the achievements in alchemy and hygiene of the Arabian *hakims* in the Baghdad-to-Cordova empire created at the point of scimitars by Islam; the birth in the so-called "Dark" Ages of the first hospitals and universities, plus the Gothic cathedrals and *The Divine Comedy*, which made this an era not of darkness but of blazing splendor; the exploration of the human body by artist-physicians in the Renaissance, which paralleled the exploration of the new world beyond the Atlantic waters; the discovery of the circulation of the blood and the beginning of scientific research in the Baroque, a period characterized by motion and emotion in art; the endeavors of the experimenters and visionaries of the Enlightenment and the Romantic periods, who heralded the transition to last century's naturalist positivistic medicine; the transition from medicine based on qualitative impressions to present-day medicine, based on quantitative measurements, which has led to psychiatry, antibiotics, ataraxics, and space medicine, and is leading to a biochemical, physical, and—once again—philosophical medicine and to the submission of man and the universe to objective evaluation and subjective integration.

The Epic of Medicine will consist of twelve installments and will be followed by *The Physician's Saga*, a series depicting the story of the physician as an individual, exemplified by the lives of great physicians, and *The Patient's Progress*, which will be dedicated to the forgotten and yet the most important man in the History of Medicine: the patient.

The Epic of Medicine will endeavor to give substance and meaning to our daily work. For, the History of Medicine is Medicine. Our medical activities—administering an antibiotic, making a psychoanalysis, performing a laparotomy—acquire meaning only when we interpret them in reverse, like a film shown backwards. Only thus can we find the historical meaning in everything we do in our profession. Our medical work—preparing a clinical history, making a diagnosis, applying treatment—would be far more efficient if we knew the *why* of what we are doing and if we could anticipate its future course. This is possible only by making, as we shall try to do in this series, *living* history of all medical work, and by doing this with love and imagination, so as to let fly once again the many-hued butterflies pinned between the pages of the huge book of History.

There are three ways of handling historical events: if they are minor, they can be *described*; if they have historical dimension, they can be *interpreted*; if they can be integrated with other events in life, they can be *narrated* like a true tale of wonder. This MD intends to do. There are many *histories* of Medicine, but there is only one *History* of Medicine that is related to the history of civilization. Through the magic of interpretative narration, to turn all the stories of physicians, patients, countries, and epochs into *one* narrative, at once living and practical, imaginative and realistic—this is the new thread we seek to weave into the fabric of our dream.

Félix Martí-Ibáñez, M.D.

The Vagaries Of Disease As Exemplified By Coronary Artery Ailments

One important reason why diagnosis is so frequently difficult is that, as Matthew Baillie said, "It is very seldom that diseases are found pure and unmixed, as they are commonly described by authors, x x x . ." As a matter of fact, several acute clinicians have commented on this difficulty. William Osler once remarked that in diagnosis one often met with "the play of Hamlet with the part of Hamlet left out," and the French use the term "formes frustes" to describe atypical or abortive

forms of disease. Recently Dr. Jesse E. Edwards of the Mayo Clinic* has recorded observations on coronary artery disease based on the pathological changes found both in patients dying under the care of physicians either in hospitals or at home and in those autopsied at the request of the Coroner's office. The method used in examining the coronary vessels consisted of making cross sections of the epicardial vessels at regular intervals varying from 3 to 5 mm. apart. When significant sclerosis was found the heart was opened by making a series of thin transverse slices through the ventricles ending at a level just below the atrio-ventricular valves and also in areas permitting inspection of the zones supplied by other coronary branches. Dr. Edwards and his colleagues showed from a study of 600 hearts from males between 30 and 90 years old and a like number from females in the same age range that about 75 per cent of the males had coronary luminal narrowing of more than 50 per cent between ages 50 and 59, while a like number of women had similar narrowing but in the age decade between 70 and 79. A two year study by Drs. Burchell and Berkson showed that at the Mayo Clinic 63.5 per cent of all cardiac deaths were due to coronary disease. Dr. Edwards points out that many of the patients with significant coronary sclerosis either had no history of coronary disease or had attacks of angina pectoris without a history of myocardial infarct, though pathological evidences of infarction were sometimes present. He also noted that sudden death might occur in such patients and that this usually indicated severe atherosclerosis rather than acute occlusion. Such patients may also suffer from so-called angina decubitus. In some of this group there was evidence of acute myocardial infarction which the pathologist sees only occasionally as 85 per cent of patients survive an acute attack. The concrete cause of sudden deaths is probably myocardial ischemia which produces cardiac standstill or serious arrhythmia and is frequently associated with unusual exertion. Patients with acute myocardial infarction may also die of congestive failure or cardiac rupture and may present evidence of pulmonary embolism or hemopericardium with cardiac tamponade. In the discussion which followed Dr. William Dock called attention to the great variations in symptomatology among groups of patients from different localities and observed that bad judgment in dietary or physical treatment might lead to serious results. Dr. de la Chapelle emphasized the value of the slicing technique.

G. B.

* Bull., New York Acad. Med., 1957, Vol. 33, p. 199.

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F. J. L. BLASINGAME, M.D.
executive vice president

ERNEST B. HOWARD, M.D.
*assistant
executive vice president*

July 30, 1959

William R. Richards, M. D.
Executive Secretary
Connecticut State Medical Society
160 St. Ronan Street
New Haven 11, Connecticut

Dear Doctor Richards:

If time would permit, I would like very much to write individual members of the Connecticut State Medical Society as well as members of lay organizations in your state, to thank them for the splendid cooperation they gave us during the past month in regard to the Forand Bill. Your personal effort in cooperating with Mr. Dalbec of our Field Service Division in alerting the profession was most gratifying.

The spontaneous results of the many letters, telegrams, etc., received by your Congressmen; your official request to be heard by the Committee and the presence of Ellwood C. Weise, M. D., at the Hearings in Washington; the cooperation from your Woman's Auxiliary, certainly were most encouraging to the staff of the American Medical Association. All this, as well as the cooperation indicated by lay organizations in your state, represents the only possible way we have of winning this fight.

Would you kindly convey our thanks to all concerned and may we earnestly solicit your continued cooperation in keeping your Congressmen informed on all legislation pertaining to health when they are at home or in Washington.

This indeed will preserve the cause of freedom; and, for this philosophy, we cannot be challenged.

Sincerely yours,

F. J. L. BLASINGAME, M. D.

FJLB:db

THE PRESIDENT'S PAGE

ON June 30, 1959, our General Manager received the ominous announcement that a hearing was to be held before the House Ways and Means Committee from July 13 to 17 on the 1959 version of the Forand Bill, H.R. 4700. On July 1st an important alert was mailed to every member of our Society.

Within the matter of a few days it was necessary to make many decisions, develop and implement a plan of action, and prepare an official statement for our Society. As a result, the Society was one of the first of 33 state medical associations officially to request time to be heard by the Committee. I was privileged to act as your representative and can report first hand on this matter.

During those few hectic days of preparation it was necessary to alter our plans frequently. Up-to-the-minute data was supplied to us by CMS, Blue Cross, and the commercial insurance industry. By contrast, several groups supporting the bill used out-dated figures from 1955-57, which did not truly reflect the medical care needs or the *current* coverage for the age 65 group (and "others") eligible for benefits under OASDI to which the Forand Bill would apply. The 1958-59 figures we used were much more accurate and not only revealed the improved coverage of this group of the elderly under the voluntary plans but demonstrated that the greatest strides in this type of coverage had been made since January, 1959, and more particularly since April.

Arthur S. Fleming, Secretary of Health, Education and Welfare, was the lead-off witness. He was a factual, cool and well informed witness who testified for HEW and expressed the sentiment of the Administration. The passage of the bill, he said, would be "very unwise. . . and would bring to a virtual halt the voluntary efforts that are moving forward in such an encouraging manner. It would establish a course from which there would be no turning back" and would mark "the beginning of the end."

Representatives of many medical societies met nightly in conference and did an excellent job in cooperating with the AMA by appearing in opposition to the bill, considering the problem as it applied to their respective states; while Dr. Leonard W. Larson, Chairman, AMA Board of Trustees, and Dr. Frederick C. Swartz, Chairman, AMA Committee on Aging, effectually presented the AMA viewpoint.

Our stand was supported by the American Nursing Home Association, the Chamber of Commerce of the United States, the insurance industry, the Blue Plans and others, including the American Farm Bureau, who strongly intimated that one could well imagine what would happen to medical affairs if we were to judge from the government's bungling in the control of agriculture.

The stand of organized medicine was seriously challenged by Nelson H. Cruikshank, Director, Department of Social Security, AFL-CIO, who, with his retinue of associates, appeared in support of the health benefits for beneficiaries of OASDI along the lines proposed by the Forand Bill. Rep. Simpson (R.-Pa.) made Cruikshank admit that the AFL-CIO constitution favored, or even called for, compulsory national health insurance. Rep. Curtis (R.-Mo.) told Cruikshank that "we can't settle matters on generalities" and that housing and indigency, which are *not* included in H.R. 4700, should be taken up as separate matters from health. Rep. Alger (R.-Texas) continued to insist that Cruikshank give him a satisfactory definition of "this matter of right" to which he continually referred. The latter defined it as "benefits imbedded in Social Security by contributing to it." This did not seem to satisfy Rep. Alger, inasmuch as many who would receive benefits under OASDI would not have contributed to it.

Senator Wayne Morse (D.-Ore.) appeared in favor of H.R. 4700 as did the National Association of Social Workers, the American Public Welfare Association, the American Federation of State, County and Municipal Employees (AFL-CIO), the Council of Golden Ring Clubs, and Walter P. Reuther (AFL-CIO and U.A.W.). The latter was intensively questioned by Reps. Alger (R.-Texas) and Mason (R.-Ill.). The Physician's Forum, a national organization of 1,000 liberal doctors, condemned the AMA's stand.

While Rep. Aime J. Forand (D.-R. I.), may be attempting to lull us into deep slumber with such phrases as "I don't think we will be able to get this legislation to the floor before adjournment" and "I am hopeful of action early next year," he may suddenly decide to activate his pet project, inasmuch as the bill is still before the committee. Though this may not happen, the bill certainly will be a major political issue next year. It therefore behooves every member to be alert and responsive to the sparking of an active Committee on National Legislation, beginning right now!

ELLWOOD C. WEISE, SR., M.D.

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of the

CONNECTICUT STATE MEDICAL SOCIETY

and the

YALE UNIVERSITY SCHOOL OF MEDICINE

YALE-NEW HAVEN MEDICAL CENTER

310 Cedar Street, New Haven

SEPTEMBER 30, 1959

GENERAL INFORMATION

REGISTRATION FEE:

The registration fee of \$5.00 provides for admission to all sessions of the Congress.

Hospital residents and interns will be admitted without charge, if a statement of their position, signed by an official of the hospital, is presented at the registration desk.

MEETING PLACE:

All of the sessions will be held in Brady Auditorium and Fitkin Amphitheater at the School of Medicine and New Haven Hospital. Two sessions will be held simultaneously giving a broad selection of topics.

TELEPHONE:

Telephone messages will be received at New Haven, UNiversity 5-9961.

LUNCHEON:

Luncheon will be available in the Memorial Unit Cafeteria.

PARKING:

There are public parking areas adjacent to the Medical School and Hospital; also metered curb parking.

PROGRAM

WEDNESDAY, SEPTEMBER 30, 1959

9:00 REGISTRATION

BRADY AUDITORIUM

Paul F. McAllenney, Jr., *New Haven, presiding*

9:30 DETECTION OF BLEEDING AND CLOTTING PROBLEMS IN CHILDREN

Louis K. Diamond, *Boston, Massachusetts; Associate Professor of Pediatrics, Harvard Medical School; Associate Chief, Medical Service, Children's Hospital*

10:30 PRESENT STATUS OF IMMUNIZATION WITH ORAL, LIVE, ATTENUATED, POLIOVIRUS VACCINE

Albert B. Sabin, *Cincinnati, Ohio; Professor of Research Pediatrics, University of Cincinnati College of Medicine; Chief, Division of Infectious Diseases, Children's Hospital Research Foundation*

11:30 INTERMISSION

Howard Levine, *New Britain, presiding*

11:45 CLINICOPATHOLOGICAL CONFERENCE

H. M. Zimmerman, *New York City; Professor of Pathology, Columbia University College of Physicians and Surgeons; Chief, Laboratory Division, Montefiore Hospital*Discussant: Gerald Klatskin, *New Haven.*

1:00 LUNCHEON

Oliver J. Purnell, *Rockville, presiding*

2:30 MANAGEMENT OF CARDIAC ARREST

Hugh E. Stephenson, Jr., *Columbia, Missouri; Professor and Chairman, Department of Surgery, University of Missouri School of Medicine; Chief, Surgical Services, University Hospitals*

3:30 RATIONAL BLOOD REPLACEMENT IN THE SURGICAL PATIENT

Fred H. Allen, Jr., *Boston, Massachusetts; Assistant Clinical Professor of Pediatrics, Harvard Medical School; Associate Director, Blood Grouping Laboratory of Boston*

4:30 ADJOURNMENT

PROGRAM

WEDNESDAY, SEPTEMBER 30, 1959

9:00 REGISTRATION

FITKIN AMPHITHEATER

Marvin Lillian, *New Haven, presiding*

9:30 HYPEREXIA NERVOSA

Alvan R. Feinstein, *New York City; Assistant Professor of Medicine, New York University College of Medicine; Clinical Director, Irvington House*

10:30 CHEMICAL STUDIES AND "ANXIETY"

Mandel E. Cohen, *Boston, Massachusetts; Neurologist, Massachusetts General Hospital; Psychiatrist, Boston Lying-In Hospital*

11:30 INTERMISSION

William J. Lahey, *Hartford, presiding*

11:45 CLINICOPATHOLOGICAL CONFERENCE

Ivan L. Bennett, Jr., *Baltimore, Maryland; Professor and Chairman, Department of Pathology, Johns Hopkins University School of Medicine; Pathologist-in-Chief, Johns Hopkins Hospital*

Discussant: Louis H. Nahum, *New Haven.*

1:00 LUNCHEON

Gray Carter, *Greenwich, presiding*

2:30 HEART DISEASE IN PREGNANCY

Harold Gorenberg, *Jersey City, New Jersey; Chief, Cardiac Clinic, Margaret Hague Maternity Hospital; Associate Professor Clinical Medicine, Seton Hall College of Medicine*

3:30 URINARY TRACT INFECTIONS

Paul B. Beeson, *New Haven; Professor of Medicine, Yale University School of Medicine; Chief, University Medical Service, Grace-New Haven Community Hospital*

4:30 ADJOURNMENT

Special Article

Vulvar Diseases – Diagnosis And Treatment

MORTIMER D. SPEISER, M.D.

New York City

VULVAR DISEASES DIAGNOSIS AND TREATMENT

IN common with the dermatologist, the gynecologist is frequently called upon to treat vulvar dermatoses particularly when they are strictly limited to the genital area. Pruritus, dysuria and dyspareunia are the most significant subjective symptoms which are common to many of these disorders. Pruritus can be most distressing and oftentimes severe enough to seriously interfere with the normal course of life—domestic, occupational, social and sexual.

PRURITIC VULVAR DERMATOSES MYCOTIC VULVITIS

With the exception of neurodermatitis and leukoplakia, the most common pruritic conditions involving the external genitalia of the female belong to the group of mycotic, protozoal and parasitic diseases. Prior to the use of broad spectrum antibiotics, yeast-like infections of the vulva and vagina were found almost exclusively during pregnancy and in the inadequately controlled diabetic. As the result of the widespread use of these anti-infectious agents, mycotic vulvitis and vulvovaginitis have been encountered with increasing frequency.

The clinical picture of mycotic vulvitis is that of an acutely erythematous eruption, frequently accompanied by maceration involving the vulva, perineal and perianal regions, and extending also at times, to the inguino-crural areas. As a result of edema, inflammation and maceration in these locations, the folds between the labia majora and minora and the inguinocrural regions exhibit a decided tendency toward fissuring. Characteristic of mycotic vulvitis are the adherent, white or bluish-white thrush-like patches irregularly scattered or diffusely spread over the inner aspects of the labia majora, labia minora and the vestibule. Removal of the thrush-like patches exposes superficial, small areas of ulceration. Unfortunately these characteristic lesions are not always encountered.

The vaginal mucosa, when involved is diffusely reddened and covered with scanty to moderate

amounts of whitish, curdy discharge. Here and there in the vault and vaginal fornices small adherent thrush-like patches or superficial ulcerations may be seen.

The coexistence of glycosuria must always be excluded. While the history and clinical picture are very suggestive, an unequivocal diagnosis can readily be made by demonstrating the candida in a wet saline preparation or preferably a 15 per cent solution of sodium or potassium hydroxide. When mycotic infection is suspected and the characteristic mycelia and buds are not detected readily in a hanging drop preparation, the inoculation of Nickerson's medium with vaginal secretion will reveal characteristic chocolate to black colonies of candida.

Treatment: Propion Gel or Aci-Jel instilled into the vagina in combination with its external application to the vulva may act in a palliative and, frequently, in a curative fashion. Mycostatin vaginal inserts coupled with the external application of Mycostatin cream yield more rapid and more satisfactory results and represent today's treatment of choice. In patients in whom pruritus is a prominent symptom, the use of simple antipruritic medicaments including the topical corticosteroid preparations will prove very helpful. In cases in which recurrences are the result of a candida infested intestinal tract, the oral administration of Mycostatin as well as its local application along with the strictest attention to details of local hygiene are essential if cure is to be effected.

TRICHOMONAD VAGINALIS VAGINITIS

Just about as frequent as mycotic vulvitis with which it is combined at times, is the trichomonad vaginalis vaginitis. The erythematous and edematous eruption of the vulva associated with this infection is the result of the irritating discharge of the associated vaginitis. The vaginal mucosa is likewise reddened and edematous with a characteristic hemorrhagic, papillary, strawberry appearance most frequently seen in the fornices and on the mucosa of the portio vaginalis of the cervix. The discharge is usually profuse, malodorous, purulent, frothy and slightly yellowish or greenish-gray in

color. The active flagellate is readily identified in a warm hanging drop saline suspension of the discharge.

Treatment: Numerous medicaments have been used in the treatment of trichomonad vaginalis vaginitis but no specific cure is as yet available. Relapses as well as re-infections are particularly frequent. The eradication of foci of infection in Skene's and paraurethral ducts, proper local hygiene, intensive treatment during the menstrual period as well as the prevention of re-infection from the male partner are all helpful in preventing relapses and/or re-infections. Symptomatic improvement may be readily accomplished with various trichomonocidal agents such as Devegan, Vioform, Silver Picrate, Trichofuron and a host of others, none of which are specific. Pruritus can be relieved by wet dressings followed by the application of soothing antipruritic agents including the topical corticosteroid preparations.

TINEA CRURIS

Another type of fungus infection encountered in this location with a considerable degree of frequency is that of tinea cruris. The infection may be caused by one of several organisms particularly the epidermophyton floccosum and the trichophyton rubrum. The first manifestations, in the form of mild scaling, erythema and pruritis, usually appear in the inguino-crural areas. The eruption may extend medially to include the genitalia, perineal and perianal regions and laterally, to the upper and medial areas of the thighs. Without adequate therapy the extent and severity of the eruption as well as the subjective manifestations, tend to increase and become more annoying. The inferior border of the eruption, circinate or scalloped, is usually sharply defined; in tinea rubrum infections the border is often so well developed and raised that it produces an almost cord-like effect. It is the well defined border which accounts for the older name given to this condition, namely, eczema marginatum. Simple mycologic studies of the scrapings from the edge of the lesion will serve to verify the true nature of the process.

Treatment: The response to treatment depends to a great degree on the nature of the specific offending organism. It may be said in general that tinea cruris responds readily to antimycotic remedies although remissions and recurrences are frequent. These can oftentimes be prevented by the prolonged use of the antimycotic remedies. After improvement seems well established medicaments should be continued, perhaps at less frequent intervals for an additional period of approximately four weeks. While a host of antimycotic agents are available, many of them especially the greasy preparations are poorly tolerated because of their irri-

tating effect in this area. The daily painting of a one per cent tincture of iodine solution followed by a simple dusting powder will frequently bring about considerable improvement within a period of one week. Thereafter treatment every other day will probably suffice. Equally effective is the morning and evening application of calamine lotion to which has been added resorcin in concentrations no higher than two to four per cent. After apparent cure has been obtained, treatment may be continued with the use of fungistatic dusting powders such as those containing undecylates.

PEDICULOSIS PUBIS

Both pediculosis pubis and scabies although more frequent during periods of upheaval are encountered often enough even under normal circumstances to warrant their inclusion in the present paper. Neither the crab louse nor the itch mite have any regard for the social status of their hosts. Pediculosis pubis is most frequently transmitted by sexual contact although it may also be acquired from contaminated toilet seats and bedding.

It is not unusual to see a patient suffering from pediculosis pubis who has been treated for many weeks with antipruritic remedies for "essential" pruritus vulvae. This can be distressing particularly if the treatment has served no better purpose than to produce a secondary dermatitis. Admittedly the pediculi may be few in numbers early in the disease and these few are frequently buried at the bases of the hair follicles flush with the skin. However, careful examination with the possibility of pediculosis in mind and a thorough search for the pediculi and the adherent gray nits will help to avoid one of the common errors of omission. The skin manifestations are minimal during the early phase; later on the effects of rubbing and scratching are apparent in the form of diffuse erythema, excoriations and crusting.

Treatment: Kwell cream or lotion or 25 to 33 1/3 per cent Benzyl Benzoate emulsion will effect a cure following a single application. Nits will be removed and the pediculi destroyed. A second application the following day or several days later will add to the certainty that all organisms have been destroyed and cure fully established.

SCABIES

Scabies may provoke the most intense nocturnal pruritus about the external genitalia. Other areas of involvement include the webs of the fingers, flexor aspects of the wrists, the anterior folds of the axillae, the breasts and buttocks.

Frequently the lesions and symptoms predominate in locations which justify the patient's consultation with her gynecologist. The lesions pro-

voked by the itch mite are multiform consisting of papules, pustules, excoriations and crusts in addition to the characteristic beaded burrow in the depths of which the parasite can be found. A pustule or vesicle is usually located at one end of the burrow. Unequivocal proof of the diagnosis of scabies depends upon the demonstration of the itch mite from the depths of its burrow.

Treatment: Antiscabetic remedies bring about dramatic and prompt improvement. Kwell cream or lotion or a 25 to 33 1/3 per cent Benzyl Benzoate emulsion is to be thoroughly applied to all involved areas immediately after a hot soap and water bath. This treatment may be repeated in five to seven days in order to assure complete eradication of the itch mite. Simple soothing lotions or creams may be necessary subsequently to relieve any residual dermatitis and pruritus.

COMMON SKIN DISORDERS WITH GENITAL MANIFESTATIONS

Many common skin disorders may at times involve the integument of the female external genitalia. Included among these are contact dermatitis, psoriasis, intertrigo and lichen sclerosus et atrophicus. The classical clinical characteristics of these cutaneous entities normally found at the sites of predilection are often absent or at least markedly altered by specific factors peculiar to this anatomic location, namely moisture, friction, the apposition of cutaneous surfaces and vaginal discharges. A working knowledge of these cutaneous diseases, their clinical characteristics and the sites of predilection are essential for a proper approach to the diagnosis and treatment of vulvar dermatoses. However, in the absence of a clinically typical picture, eruptions confined to the genitalia may offer a diagnostic challenge.

CONTACT DERMATITIS

As in other locations contact dermatitis, the eczema of hypersensitivity produced by one or another chemical agent is characterized by erythema, edema, vesiculation, oozing and crusting. Preparations frequently used in this location include medicated douches, contraceptive jellies, creams and suppositories, condoms, medicated vaginal suppositories, dusting powders, perfumes, deodorant preparations and the dyes and finishing agents used in new undergarments. Other provocative agents include numerous proprietary preparations prescribed by the physician or injudiciously acquired by the patient for the treatment of pruritus. These contain anesthetic agents, antihistamines, resorcinol, tar and mercury. The clinical appearance of acute contact dermatitis is usually sufficiently characteristic to present little if any problem in diagnosis.

Treatment: The most satisfactory approach to the treatment of contact dermatitis is by means of the topical corticosteroid preparations. Even in extremely severe and acute eruptions the response is rapid, one might even say dramatic. In some instances judgment may dictate the need for a short associated course of a corticosteroid preparation by mouth. In those cases where topical corticosteroids have provided little or no response, wet dressings with simple boric acid solution or dilute Burow's solution (1:10 to 1:20) along with sitz baths containing starch, bran or oatmeal will usually provide almost prompt relief. Mild sedation during the day coupled with soporifics at night will add to the patient's comfort. After initial improvement, treatment may be continued with the use of soothing emulsions such as calamine liniment (N. F.) with menthol (0.12 to 0.25 per cent) and phenol (0.25 to .5 per cent). Usually the response to this routine during the period of approximately two weeks effects a cure in most cases providing of course that the offending agent has been eliminated. In some patients despite the elimination of the offending agent and despite antieczematous soothing treatment, the dermatitis may persist. Under these circumstances the problem of therapy becomes a more difficult one and should follow along the lines of treatment for atopic dermatitis.

SEBORRHEIC DERMATITIS

Seborrheic dermatitis is encountered with greatest frequency on the scalp, face, post-auricular regions, anterior surfaces of the chest, the periumbilical area and the genitalia. Only infrequently is the eruption confined wholly to the region of the genitalia. The dry, greasy, yellowish, erythematous, scaly and crusted variety occurs most frequently in the hairy areas of the mons and on the upper portions of the labia majora extending laterally at times to involve the inner aspects of the thighs. The moist, edematous, flexural, intertriginous variety not only involves the folds but the labia minora and vestibular areas as well. Pruritus is variable but is rarely as intense as that seen in association with atopic dermatitis or contact dermatitis.

Treatment: The treatment of the dry, greasy, scaly type of seborrheic dermatitis is best accomplished by the application of a five percent sulphur precipitate or five per cent ammoniated mercury ointment. Vioform too, in a cream or ointment form is a very effective antiseborrheic remedy. Response to therapy is usually prompt but recurrences are frequent unless therapy is continued for many weeks after the process is entirely healed. For the moist flexural variety wet dressings with dilute boric acid solution, dilute Burow's solution

or 0.1 per cent aqueous silver nitrate solution should be applied until the moist edematous phase is controlled. Subsequent therapy follows essentially along the same lines as that for contact dermatitis.

INTERTRIGO

Intertrigo, an exceedingly common affection of apposing surfaces found in and about the genital area especially of the obese, is characterized by an erythematous and macerated appearance of the involved parts. In addition to obesity, predisposing factors include hyperidrosis, lack of cleanliness and increased vaginal secretions. Intertrigo is prone to start in the inguino-crural, labio-femoral and interlabial folds as well as the cleft between the buttocks. Erythema and macerations are present on the apposing surfaces which are bathed by retained perspiration and secretions having an offensive odor. Linear abrasions are to be noted particularly at the bottom of the cleft formed by the apposing surfaces.

Treatment: The effected areas are separated and cleansed with warm water and soap. After gentle drying, simple dusting powders are then thoroughly applied. For this purpose one may employ zinc oxide, zinc stearate, bismuth, starch and French chalk. Where excessive perspiration is present, magnesium carbonate is particularly effective because of its absorptive properties. Folds of cotton can be inserted to separate the affected surfaces. In place of the dusting powders, the use of a soothing emollient preparation such as borated cold cream salve or equal parts of lime water and olive oil may prove beneficial when used to anoint the surfaces and the absorbent materials.

PSORIASIS

Psoriasis of the external genitalia is encountered with considerable frequency, usually as part of the picture of a more widespread eruption and only occasionally as a sole manifestation of the disease. The sites of predilection for psoriasis are the extensor surfaces of the elbows and knees, scalp, the sacral area, chest and abdomen. The characteristic papules or plaques are sharply defined, somewhat elevated and covered with thick, adherent, silvery-white, micaceous scales. While this characteristic appearance is frequently maintained in the pubic region and on the upper aspects of the thighs, the eruption takes on a moist, bright red appearance when the inner aspects of the labia majora, labia minora and internatal areas are involved; neither papular elements nor scaling may be seen. In the absence of typical micaceous scaling, the diagnosis of psoriasis involving only the external genitalia may at times offer some difficulty and may require histologic confirmation.

Treatment: The therapy of psoriasis leaves much to be desired. Recurrences are common and exacerbations follow temporary improvement. The classic remedies include ointments containing mercury, tar, salicyclic acid and chrysarobin alone or in varying combinations. Since the usual concentrations of these active agents may prove irritating when applied to the genitalia, it is well to start with these ingredients in lower concentrations. Ordinarily, psoriasis is not a pruritic disease but in this location it may be intensely pruritic and may require the application of topical hydrocortisone or other antipruritic preparations. Once relief has been obtained antipsoriatic agents may be combined with corticosteroid preparations for continued treatment.

THE CONFUSED WHITISH LESIONS OF THE VULVA

Considerable confusion still exists in regard to certain whitish appearing lesions involving the integument of the female external genitalia. The confusing clinical pictures find their counterpart in the similarly confusing microscopic aspects. The problem of terminology often makes the confusion more confounded. In addition combined processes may add to the difficulties in diagnosis, for example, leukoplakia may be superimposed upon neurodermatitis or on a pre-existing atrophic process. A better understanding of the clinical aspects of the various diseases as well as the microscopic characteristics will ultimately lead to improved diagnosis and a more uniformly accepted terminology.

NEURODERMATITIS—ATOPIC DERMATITIS

Neurodermatitis of the female external genitalia is extremely common, this being one of the sites of predilection. Other sites include the cubital regions, the eyelids and the sides of the neck, although the genital involvement may be the only expression of this basically constitutional disease.

The clinical picture of atopic dermatitis of the vulva is indeed a varied one. A typical lichenified plaque with its exaggerated skin markings may occupy the lateral aspects of one or both large labia or the eruption may be more extensive and also involve the labia minora, inguinal, perineal and perianal regions. The cutaneous manifestations of such widespread involvement are indeed variable. They may be so mild as to seemingly belie the severity of the complaints or the process may be so acute and edematous as to suggest an eczema of hypersensitivity. The eruption may be mildly lichenified or may be severely scratched, crusted and considerably lichenified along with thickened, whitish, soggy areas clinically indistinguishable from leukoplakia. These whitish areas are chiefly to be found on the labia minora,

clitoral folds, posterior fourchette, perineum and perianal areas.

The term neurodermatitis has been used synonymously with atopic dermatitis. The latter indicates a constitutional state in which cutaneous manifestations are present along with a familial or personal history of asthma, hay fever, vasomotor rhinitis, urticaria or infantile eczema. The term essential or idiopathic pruritus vulvae has been employed for a pruritic eruption in which the etiology is obscure or unknown. Most of the cases classified as essential pruritus vulvae are in reality manifestations of neurodermatitis or atopic dermatitis.

Treatment: The treatment of neurodermatitis presents many vexing problems not the least of which are the psychogenic disturbances of one type or another that "trigger" the eruption and prolong its course. If success in therapy is to be achieved the trauma of scratching must be prevented. The topical application of hydrocortisone and its analogues has proven a veritable boon to many, while in others the use of soothing, antipruritic lotions, liniments, ointments and creams prove equally as effective. The determination of the most satisfactory therapeutic agent is often a matter of trial and error depending in a great measure upon the sensitivity of the patient to the medicaments as well as the vehicles employed. Ofttimes the use of simple cold water compresses may temporarily relieve the irresistible desire to scratch. Warm or tight undergarments are to be avoided. When soap proves irritating as it so frequently does, detergents such as Lowilla Cake or Liquid or Dermolate should be substituted. Since sedation is such an essential part of treatment, tranquilizers are often of material benefit. Recurrences may follow any form of therapy and such recurrences of course are distressing and frustrating. One must nevertheless persist with treatment despite disappointment until satisfactory control is achieved.

Psychotherapy is reserved for those patients in whom well directed medical therapy has been of no avail and in whom psychogenic factors are obviously significant. In other intractable cases more radical measures include injection of local anesthetic agents in an oily vehicle as advised by Reich et al¹ or local alcohol injections as described by Wilson.² Undermining of the skin of the vulva with resulting partial denervation of the area is a more extensive surgical procedure advocated by Mering.³ Finally in the rare desperate case, refractory to all other measures, vulvectomy may be employed as a last resort.

LICHEN SCLEROSUS ET ATROPHICUS

Lichen sclerosus et atrophicus is a distinct entity which apparently has not been well recognized and accepted by gynecologists. Unquestionably, it has

been mistaken at times for the "atrophic" form of leukoplakia which is a much more serious disease and which carries with it the hazard of malignancy. In addition to the vulvar and perianal involvement, lichen sclerosus et atrophicus frequently occurs on the upper aspect of the trunk, on the flexor aspects of the forearms and in the cubital regions but lesions may also occur elsewhere on the body. At times the eruption may be confined to a single location as it is so often in genital involvement. The characteristic eruption consists of whitish or ivory colored, flat-topped papules either discrete but more often confluent in which form it is most often seen on the external genitalia. The distribution is usually more or less symmetrical. The labia majora and minora are involved, the latter without marked shrinkage; the process extends upwards for a variable distance on to the mons, laterally toward the inguino-crural crease and posteriorly to the perineum, perianal area and inner aspects of the buttocks. The central bead-like depression can be recognized at times either toward the margin of the genital eruption or in discrete papules scattered about the perineal and perianal areas. The microscopic picture of lichen sclerosus et atrophicus is characteristic and is readily distinguishable from the hypertrophy which characterizes leukoplakia. However, differentiation of genital lichen sclerosus et atrophicus from kraurosis, another atrophic process, is not too clearly defined. The two diseases may possibly be one and the same except perhaps for the area of involvement.

Patients with lichen sclerosus et atrophicus are usually symptom-free. Pruritus occurs only occasionally and is then rarely severe. While lichen sclerosus et atrophicus is undeniably an atrophic process and remains as such, Wallace and Whimster⁴ nevertheless found associated leukoplakia in 25 per cent of their cases and in two of these leukoplakia had eventuated in carcinoma.

Treatment: There is no specific therapy for lichen sclerosus et atrophicus beyond the occasional need for antipruritic measures for symptomatic relief. Topical hydrocortisone may be helpful in the treatment of the inflammatory reaction associated in some cases with the early manifestations.

PRIMARY ATROPHY OF THE VULVA—KRAUROSIS

In 1885 Breisky⁵ described a condition associated with cutaneous shrinkage of the vestibule, labia minora, frenulum, prepuce of the clitoris and inner aspect of the labia majora as far as the posterior commissure, which he called kraurosis. As a result of this process the labia minora and the folds of the clitoris disappear and the vaginal orifice becomes narrow and stenotic. Since many reports of kraurosis have inadvertently included leukoplakia, it was

felt that the term primary atrophy would not only be more descriptive but more accurate as well. Primary atrophy is a rare condition and when it does occur superimposition of leukoplakia is a relatively common finding. Fully developed primary atrophy of the vulva and lichen sclerosus et atrophicus are so similar in their microscopic appearance that they have been considered by many as one and the same process. Montgomery⁶ differentiates primary atrophy by the obliterative changes in the deeper blood vessels of the corium. In both diseases the etiology is unknown. Differentiation of these two processes on clinical grounds appears to be wholly justifiable since there are differences of location as well as variations in the clinical manifestations. Extragenital characteristic papules or plaques are frequently but not uniformly encountered with lichen sclerosus et atrophicus; the genital eruption almost invariably involves the labia majora, labia minora, mons, perineum and perianal areas in a more or less symmetrical fashion. Lichen sclerosus et atrophicus is rarely associated with marked shrinkage of the labia minora and the folds of the clitoris. Primary atrophy on the other hand has no extragenital manifestations and is restricted to the vestibular area, labia minora, frenulum, prepuce of the clitoris and inner aspects of the labia majora as far as the posterior commissure where the sclerosing atrophy imparts a smooth, glistening, dry, whitish, waxy yellow or red and spotted appearance.

Apart from the disappearance of the labia minora, the prepuce and folds of the clitoris, primary atrophy of the vulva is usually symptom free except for dyspareunia which results from stenosis and loss of resilience of the tissues about the vaginal introitus. Trauma with inflammation, either as the direct result of attempted coitus, or irritation provoked by a vaginal discharge, may produce soreness and pruritus. Superimposed leukoplakia must be suspected where pruritus is intense.

If lichen sclerosus et atrophicus and primary atrophy are to be considered as separate entities, the former is more frequently encountered than the latter.

Treatment: The treatment of primary atrophy is essentially symptomatic. The avoidance of trauma and the eradication of an associated vaginal or cervical discharge along with the use of simple mildly antiseptic and protective ointments such as zinc oxide, starch, etc., will help to relieve any existing discomfort. In the presence of pruritus the topical corticosteroid preparations are indicated. The administration of estrogens has proven valueless. Graduated glass dilators and the addition of lubrication in preparation for the sexual act are of limited value in cases where dyspareunia has become a problem. A change in the clinical picture

with the development of one or more thickened plaques should alert the physician to the possibility of leukoplakia and possibly of even more significant changes. Biopsy of such thickened sites and microscopic examination should be performed without delay. The proper approach to the therapy will be determined by the results of such histologic examination. Repeated biopsy is indicated, indeed mandatory, in instances in which the microscopic picture does not appear to bear out the clinical findings of activity.

LEUKOPLAKIA

Much has been written about leukoplakia of the female genitalia and that which has been written is often extremely confusing. Leukoplakia of the female genitalia is probably not as common as the literature would have us believe. Many cases of lichen sclerosus et atrophicus and of primary atrophy have been mistakenly considered as leukoplakia in the "atrophic stage." The thickened lichenified whitish areas associated with neurodermatitis have also been mistaken for leukoplakia. Leukoplakia may arise on normal integument or it may become superimposed on a pre-existing primary atrophy, lichen sclerosus or neurodermatitis. It appears as a single or as multiple, bluish-white opaque, thickened plaques which may be unilaterally or bilaterally distributed on the inner aspect of the labia majora, labia minora and clitoral folds. The lateral aspects of the labia majora, the perineal and perianal areas are very rarely involved. Pruritus is usually intense. While a plaque of leukoplakia may appear to improve at times, the usual course is one in which the lesion remains more or less unchanged over a period of many years. In occasional instances, patches of leukoplakia become progressively larger and thicker, ultimately going on to the stage of fissuring and ulceration. It is in these long neglected advancing lesions that true carcinoma develops.

The microscopic picture of leukoplakia reveals a hyperplastic process involving all the layers of the epidermis with early but definite atypism in at least the basal layer of cells. Directly below the epidermis is to be found a chronic inflammatory reaction. Leukoplakia belongs to the group of precancerous dermatoses. It is conceded that slightly less than 10 per cent of the cases eventuate in squamous cell epithelioma. On the other hand Taussig found evidences of leukoplakia in 69 per cent of the cases of carcinoma in this location and Stanley Way reported a similar finding in 82 per cent of his cases. Leukoplakia is consistently a hypertrophic process and the atrophic changes seen at times in association with leukoplakia should not be interpreted as an atrophic stage of the same condition but rather as a pre-existent primary process on which leukoplakia has been superimposed. The need for one or

more histologic examinations in suspected cases cannot be stressed sufficiently. Negative microscopic findings in clinically suspicious cases should serve as stimuli for further investigation.

Treatment: As with many other vulvar dermatoses, the therapy of leukoplakia leaves much to be desired. Estrogens, massive doses of Vitamin A and dilute hydrochloric acid alone or in combination appear to have insufficient merit to warrant their continued use. Intractable pruritus can be treated temporarily with various antipruritic measures which have previously been alluded to. This intractable pruritus and more important, the frequency with which epithelioma has been encountered are factors which justify simple local excision for the smaller lesions and partial or complete simple vulvectomy for the more diffuse leukoplakic involvement. In selected instances where the psychological trauma of such a surgical procedure is

severe, careful and frequent periodic examinations including multiple biopsies are essential during the period of observation.

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Cardiorespiratory Resuscitation

In cardiac arrest it is indeed possible to employ emergency thoracotomy successfully outside the operating room, but before open thoracotomy for cardiac massage is undertaken there must be an understanding of the difference between undertaking such a procedure in an operating room during surgery and outside it, and some guiding questions must be asked and answered, says Dr. Hamilton Southworth.

It is clear that adequate material and human resources are available in the operating room but are not as adequately represented elsewhere in the hospital. The critical time between technical death and the resuscitation required to restore life is about three to five minutes before irreparable brain damage sets in. An average time limit of four minutes is given, but some surgeons and anesthesiologists believe that this limit need not necessarily apply too strictly. In any case, the possibility of more rapidly coping with the problem of cardiac arrest is greater in the operating room than when it takes place in some other part of the hospital.

The internist who must decide whether or not to apply cardiac massage must know whether the subject has "the fundamental health to justify restoration of life." He should be able to guarantee that the four-minute time limit has not elapsed. "If he is not present at the moment of cardiac arrest, he is taking a grave responsibility if he performs a thoracotomy without having proof that the patient was alert and talking or standing up less than four minutes earlier, or if under anesthesia that he had a palpable pulse." The internist must also ask himself whether he has "the training, the equipment, and the assistance necessary to undertake the procedure (both cardiac massage and assisted respiration) and to carry it through successfully." The physician must also take into account whether personal responsibility is motivating him—by deciding whether the arrest is iatrogenic. (*Am. J. Med.* 26:327, March, 1959.)

Around The State

Hartford County

A group of residents and former residents in pathology of the New Britain General Hospital honored Dr. Paul D. Rosahn, hospital pathologist, at a surprise dinner recently for his contributions to medical research and education as well as for his more than 20 years contribution to the hospital and the community.

Guests came from Thai, Alabama, Virginia, Delaware and the New England states. Dr. Rosahn was presented with a silver cigarette box engraved with the names of the 22 guests present which was inscribed "a teacher affects eternity"—Henry Adams. The affair was arranged by Dr. Howard Levine, director of medical education at the hospital.

Dr. Isidore Geeter of Mt. Sinai Hospital was elected a trustee of the Connecticut Hospital Association recently.

Re-elected president of the Manchester area Heart Association recently was Dr. Harold J. Lehmus. He is an internist and a graduate of New York University College of Medicine.

Dr. Robert Butterfield, program chairman, reported that the association had had a very active program in both professional and lay educations, sponsoring a cardiac nursing conference for local nurses and several visits to the hospital by specialists in cardiology.

Dr. Gerard Miller, clinic chairman, reported that the cardiac clinic program had continued to develop and that a full schedule is maintained.

Dr. Walter Grossmann of Hartford was awarded

second prize in the oil portrait painting section of the 22nd annual exhibition of the American Physicians Art Association on display at the American Medical Association meeting recently.

Reappointed as chairman of the Board of Health of New Britain last month was Dr. Roger Scully.

Dr. Homer C. Wick, deputy director of the Hartford Health Department, has been appointed a trustee of the Hartford Association for Retarded Children.

A resident of Avon, he came to the department in June 1957. He is a graduate of Johns Hopkins University School of Medicine.

Dr. Wick is acting director of the Maternal and Child Health Services and director of the Greater Hartford Home Care Program.

A recent polio survey in the City of Hartford, conducted by the Hartford Health Department in cooperation with HCMA, revealed this month that the percentage of immunization in Hartford is higher than the estimates of the country as a whole. Under the age of 40, 77 per cent had one or more shots. Sixty-three per cent had three or more shots and 23 per cent had no shots.

Last month marked the fourth anniversary of the Hartford Heart Association's Rheumatic Fever Prophylaxis Program and its one-thousandth patient as well, Dr. Kenneth F. Brandon, president of the Association, said.

During its four-year span, the Prophylaxis Program has seen a very low rate of Rheumatic Fever recurrences among its patients. Only one per cent of those enrolled had recurrent attacks and in every case upon investigation it has been proven that the patient has been unfaithful in following the program.

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Auxiliary Calendar 1959-60

State Board Meetings

September 28, 1959, Colonial House, Hamden.

November 30, 1959, Colonial House, Hamden.

February 29, 1960, Mrs. Walter Nelson, 360 Main Street, Cromwell.

March 28, 1960, Colonial House, Hamden.

National Fall Conference for State Presidents and Presidents-Elect, National Officers and National Committee Chairman, October 5, 6, 7, 1959, Drake Hotel, Chicago.

State Semi-Annual Meeting, Gallo Terraces, Berlin, October 20, 1959.

State Annual Meeting, Hartford. Date and place to be announced.

Today's Health Announcement

A new and extensive circulation program designed to fulfill the communications and advertising potentials of the magazine necessitates a change in the promotional activities. The A.M.A. and executives of Today's Health wish to express their appreciation and gratitude to the Woman's Auxiliary for the outstanding cooperation and service they have rendered in this project since 1923. The TODAY'S HEALTH Committee has been discontinued.

Theme For 1959-60

"INDIVIDUAL RESPONSIBILITY FOR BETTER COMMUNITY HEALTH" is the theme selected by the National President, Mrs. Frank Gastineau, for the coming year.

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In Memoriam

Welch, Winthrop S.—Torrington; Cornell University Medical College, 1941; served four years with the U.S. Army as medical officer in a combat infantry unit in the Pacific Theater during World War II, discharged with rank of major; prior to his practice in Torrington he served as resident physician in obstetrics and gynecology at Hartford Hospital; began his practice in Torrington in 1949; died suddenly of a heart attack while in his office, July 20, aged 46.

Special Notices

YALE UNIVERSITY SCHOOL OF MEDICINE POSTGRADUATE SERIES IN OPHTHALMOLOGY 1959-1960

The following meetings will be held in the Beaumont Room, Sterling Hall of Medicine, 333 Cedar Street, New Haven, on Fridays, 3:45 to 5:00 P.M. This series of teaching conferences is planned especially for the ophthalmologist and conducted by the Section of Ophthalmology, Dr. Rocko M. Fasanella, Chairman. For registration information apply Dr. Arthur Ebbert, Assistant Dean of Postgraduate Education, Yale University School of Medicine, 333 Cedar Street, New Haven.

September 25—Re-evaluation of the Photocoagulator. Dr. Graham Clark.

October 9—A Review of Experimental and Clinical Data Concerning Alpha-Chymotrypsin. Dr. Richard C. Troutman.

October 23—Electron Microscopy of the Ciliary Body and its Relation to Aqueous Secretion. Dr. George D. Pappas.

November 6—Secondary Post-Enucleation Implants and Auxiliary Procedures. Dr. William Stone, Jr.

November 20—Treatment of Uveitis. Dr. Dan M. Gordon.

December 4—Interesting Cases in Eye Pathology. Dr. Fred Williams.

January 29, 1960—The Treatment of Retinoblastoma by X-Ray Alone and by the Combination of X-Ray and T.E.M. Dr. Norah duV. Tapley.

February 26, 1960—Sub-Normal Visual Aids. Dr. Carlton C. Phillips.

March 11, 1960: Secondary Glaucoma. Dr. H. Saul Sugar.

March 25, 1960—The Management of Intraocular Foreign Bodies. Dr. Harvey E. Thorpe.

The 44th Scientific Assembly of the Interstate Postgraduate Medical Association will be held at the Palmer House, Chicago, November 2-5, 1959.

Information concerning the program should be addressed to Roy T. Ragatz, Executive Director, Box 1109, Madison, Wisconsin.

Reservation for accommodations should be addressed direct to the Hotel Palmer.

THE NEW ENGLAND POSTGRADUATE ASSEMBLY

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The Greater Bridgeport Chapter of the Connecticut Academy of General Practice announces a POSTGRADUATE COURSE IN CARDIOLOGY

which will be given by Dr. A. V. N. Goodyer, associate professor of medicine at Yale University, New Haven.

The sessions will take place at Bridgeport Hospital, Bridgeport, Conn. on Monday evenings as follows:

- Sept. 21—The basic cardiac examination
- 28—Cardiac Radiology
- Oct. 5—Congestive Heart Failure
- 12—The Arrhythmias
- 19—Rheumatic Heart Disease
- 26—Cor Pulmonale and pulmonary vascular disease
- Nov. 2—Congenital Heart Disease
- 9—Hypertension
- 16—Ischemic Heart Disease
- 23—Diseases of the Pericardium and Cardiac Trauma
- 30—Unusual forms of Heart Disease
- Dec. 7—Work-evaluation of the cardiac patient and rehabilitation.

The sessions will start at 9 P.M. sharp in the Staff Conference Room. The fee for this course is \$25. Interns and Residents may attend the lectures free. Inquiries and registration may be sent to Dr. Frank F. Northman, 1884 Park Avenue, Bridgeport 4, Conn.

Credit in Group I will be given to members of the American Academy of General Practice.

HARTFORD HOSPITAL

SATURDAY MORNING 11 O'CLOCK GUEST SPEAKERS

September 17 to December 19, 1959

September 19 (Three Day Visiting Surgeon) September 17, 18, 19—David C. Sabiston, Jr., M.D., Associate Professor of Surgery, Johns Hopkins Univ. School of Medicine.

Subject: Physiologic and Surgical Aspects of the Coronary Circulation.

September 26—S. J. Thannhauser, M.D., Professor Emeritus of Medicine, Tufts Medical School.

Subject: Case Presentation.

October 3—Theodore Woodward, M.D., Professor of Medicine, Univ. of Maryland School of Medicine.

Subject: The Response of the Host to Infection in Treatment.

October 10—Francis Wood, M.D., Professor of Medicine, University of Pennsylvania School of Medicine.

Subject: 9:00-10:30 A.M. Medical Ward Rounds

11:00 A.M. Is The Medical History and Physical Examination Important?

October 17—Lester Adelson, M.D., Assistant Coroner, Cuyahoga County, Cleveland, Ohio.

Subject: Medico-Legal Aspects of Shakespeare's *Hamlet*

October 24—Frank O. Wood, M.D., Attending Gynecologist, Hartford Hospital.

Subject: Inside Africans

October 31—Charles Janeway, M.D., Professor of Pediatrics, Harvard Medical School.

Subject: 9:00-10:30 A.M. Pediatric Ward Rounds

11:00 A.M. Human Plasma Proteins and Their Relation to the Understanding and Treatment of Disease.

November 7—Frank Gray, M.D., Associate Professor of Medicine, Yale Univ. School of Medicine.

Subject: Pulmonary Diseases and Cor Pulmonale.

November 14—Garfield Duncan, M.D., Professor of Medicine, Univ. of Pennsylvania School of Medicine.

Subject: Diabetes and Obesity.

November 21—Philip Le Compte, M.D., Pathologist, Faulkner Hospital, Assistant in Pathology, Harvard Medical School.

Subject: Atherosclerosis.

November 28—Myles Standish, M.D., Attending Dermatologist, Hartford Hospital.

Subject: Dermatology—Kodachrome Presentation.

December 5 (Three Day Visiting Surgeon) December 3, 4, 5—Francis Moore, M.D., Professor of Surgery, Harvard Medical School, Peter Bent Brigham Hospital.

Subject: To be announced.

December 12—George Ludwig, M.D., Assistant Professor of Medicine, Univ. of Pennsylvania School of Medicine.

Subject: 9:00-10:30 A.M. Medical Rounds.

11:00 A.M. The Porphyrias.

December 19—Leon Motyloff, M.D., Pathologist, St. Luke's and Women's Hospital, New York City.

Subject: 10:00 A.M. The Cervix in Pregnancy.

11:00 A.M. Metrorrhagia Hemorrhagica.

Letters To The Editor

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July 22, 1959

To the Editor,

The Associates of the Yale Medical Library have recently announced that a Book Fund has been established at the Medical Library to honor Dr. Creighton Barker, a one time Trustee of the Library Associates and a notable contributor to its collections.

Letters have been sent to many of Dr. Barker's friends from the Associates Committee consisting of Doctors George Blumer, John F. Fulton, Vernon W. Lippard and Herbert Thoms. The purpose of this letter is to say that contributions to this fund, however modest, are welcome from any member of the State Medical Society who wishes to share this way of honoring Dr. Barker.

Checks may be made payable to Yale University and mailed to Dr. Herbert Thoms, Yale Medical Library, 333 Cedar Street, New Haven, Connecticut.

HERBERT THOMS, *Chairman*
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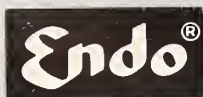
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The Doctor's Office

John X. R. Basile, M.D. announces the removal of his office from 51 Gillett Street to 140 Woodland Street, Hartford.

Chester M. Bernstein, M.D. announces the opening of an office for the practice of internal medicine in association with Dr. Alexander E. Bayer and Dr. Lawrence B. Ahrens at 25 Arch Street, New Britain.

Marion R. S. Brown, M.D. announces the re-opening of an office for the practice of general medicine at 3 Colony Street, Meriden.

Michael M. Devenis, M.D. announces the removal of his office from 20 East Main Street to 20 Willow Street, Waterbury.

Virginia Dolan, M.D. announces the opening of an office for the practice of pediatrics at 106 Litchfield Street, Torrington.

Marvin I. Fox, M.D. announces the opening of an office for the practice of internal medicine and gastroenterology at 75 New Haven Avenue, Milford.

William A. Hoffman, M.D. announces the opening of an office for the practice of internal medicine and gastroenterology at 325 Reef Road, Fairfield.

L. Ronald Homza, M.D. announces the opening of an office for the practice of general medicine at 1785 Boston Avenue, Bridgeport.

Henri Janian, M.D. announces the opening of an office for the practice of obstetrics and gynecology at 172 North Street, Stamford.

Mark Josel, M.D. announces the opening of an office for the practice of internal medicine in association with Dr. Norman Mann at 915 Asylum Avenue, Hartford.

William M. Kane, Jr., M.D. announces the opening of an office for the practice of obstetrics and gynecology at the Trumbull Center Professional Building, Trumbull.

Peter P. Ruseski, M.D. announces the opening of an office for the practice of general medicine at 2200 Park Avenue, Bridgeport.

Isidore Schnap, M.D. announces the opening of an office for the practice of psychiatry at 1007 Farmington Avenue, West Hartford.

Richard L. Shelling, M.D. announces the opening of an office for the practice of pediatrics at 610 Campbell Avenue, West Haven.

Philip E. Sumner, M.D. announces the opening of an office for the practice of obstetrics and gynecology in association with Dr. Robert Alesbury at 36 Haynes Street in Manchester.

Michael Villari, M.D. announces the opening of an office for the practice of general medicine at 4 East Main Street, Plainville.

PLACEMENT WANTED

THE SOCIETY'S PLACEMENT SERVICE IS IN RECEIPT OF THE FOLLOWING WHO WOULD LIKE TO PRACTICE IN CONNECTICUT.

1. Walter R. Thayer, Jr. Age 30. M.D. Tufts Medical 1954. Internship Rhode Island Hospital, Providence, R. I. Internal Medicine and Gastroenterology.
2. New Haven County physician, about 70 years of age, is considering retiring from practice in dermatology. Interested in part time or full time position as administrator or consultant.

Any member of the Society knowing of opportunities for placement of these physicians is asked to communicate with the Executive Secretary's Office, 160 St. Ronan Street, New Haven.

Meetings Scheduled For September

September 9 Joint Committee of Society's Committee on Hospitals and Committee on Professional Practice of Connecticut Hospital Association.

September 10 Joint Liaison Sub-committee meeting.



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Book Reviews

HYPERTENSION: The First Hahnemann Symposium on Hypertensive Disease. Edited by John H. Moyer, M.D. with the assistance of John R. Beem, M.D., Joseph D. Palma, M.D., William Likoff, M.D., Robert Bower, M.D., Arthur Grollman, M.D., Lewis C. Mills, M.D. 790 pages illustrated. \$14.00. W. B. Saunders Co., Philadelphia and London.

Reviewed by LOUIS H. NAHUM

This book is the result of a symposium held at Hahnemann Medical School in Philadelphia in December 1958. Ninety-one authorities in this field presented papers which are printed in this volume. It is divided into five parts. At the end of each part there is a spirited discussion in which is brought out the areas of agreement and disagreement among the participants. Part I deals with Pathology and clinical aspects of hypertension. Part II considers basic ideas of the Etiology of Hypertension. In Part III we find the pharmacology of hypertension and use of sympathetic blocking agents. Part IV A deals with the role of salt and diuretics in the therapy of hypertension. Part IV B considers special problems in the therapy of hypertension such as juvenile hypertension, hypertensive emergencies, hypertension of toxemia of pregnancy, surgery in the treatment of hypertension of renal and adrenal origin and pyelonephritis. Part V A considers the surgical approach to essential hypertension. Part V B is a panel discussion on the effect of therapy on prognosis in patients with hypertension. Part V C is a summary of today's recommendations for drug therapy of hypertension with the Editor as moderator.

The participants are all recognized authorities in various aspects of hypertensive disease who have contributed liberally to the great advances which have been made in the last 10 years. The etiology and clinical manifestations of hypertensive disease are dealt with first. It is brought out that there are some known causes of hypertension such as adrenal tumors, pyelonephritis and renal artery thromboses, but that the cause of the vast majority of hypertension is still unknown. In the Soviet Union, this latter type of hypertension is thought to be a cortical neurosis. This view is barely dealt with at all and reflects the absence of an awareness of Russian literature by many American investigators.

The papers present important evidence that the vascular changes in hypertension are probably a direct result of the blood pressure elevation. The contributing effects of hyperlipemia in accelerating vascular disease is not seriously considered. Nevertheless if this were another factor in vascular deterioration, it should be dealt with at the same time as hypertension itself is brought under control. But it is made clear, that to treat hypertension effectively it is necessary to recognize that cases of hypertension should be investigated for removable causes and all should have vigorous measures taken to reduce the blood pressure level by drugs or surgery or both. This is taken up in the latter part of the book. The clinical pharmacodynamic and therapeutic use of drugs are thoroughly covered. At the end is given the result of a panel of investigators, pharmacologists, internists and surgeons who outline recommendations for an over-all therapeutic program. As far as drugs are concerned, it is brought out that age is no contraindication to their use and that basal treatment with

chlorothiazide and the step-wise addition of Rauwolfia, hydralazine or a ganglionic blocking drug where indicated, constitute an effective anti-hypertensive regimen applicable to all age groups. More specific techniques are presented in step by step management of mild, moderate and severe hypertensive patients.

This book contains the latest ideas on the hypertensive problem in this country. What it does not contain and what is still unknown is the cause of hypertensive disease and until this is clarified we must remain in a realm with many diverse ideas. Although there are some areas of disagreement as regards management, in general all recognize how to discern the surgical from the medical cases, the urgency of restoring the normotensive state by whatever means available to avoid vascular deterioration and its complications in the heart, brain, kidney and other areas. To spice the appetite of a prospective reader the following quote from a discussion shows the freedom of the discussors. Dr. Fries "I think there are two sins. One is the sin of omission, when you don't treat intensively enough but just give drugs without any specific purpose of lowering blood pressure in the patient who *should* have his blood pressure lowered; the other sin is to overtreat a patient who shouldn't have treatment except for mild sedation and psychotherapy." The second sin was seriously questioned by other discussants.

It is an excellent reference guide for students, practitioners and specialists and is highly regarded by this reviewer as the last word on the management of hypertension as of Dec. 1958.

HEARING, A HANDBOOK FOR LAYMEN. By Norton Canfield, M.D. The first volume in the new LAYMEN'S HANDBOOK SERIES on disease and abnormal health conditions. Doubleday and Company, Inc., New York, 1959. 214 pp. \$3.50.

Reviewed by GERALDINE GARRISON

Although the handbook is designed primarily for laymen, much of the information will be of value to physicians, audiologists and speech therapists in work with both children and adults.

Dr. Canfield discusses objectively yet sympathetically the fears, frustrations and tensions resulting from impaired hearing and gives guidance in understanding and meeting these problems. Parents, teachers, counselors, employers and relatives, as well as the patient himself, will find many questions answered by an understanding medical counselor with the total rehabilitation point of view.

Parents asking, "Why doesn't my child talk?" are given concrete suggestions for detecting a hearing loss as possible cause for the delayed speech. The adult fearing he is losing his hearing will find his problems discussed with suggestions for help. Older citizens find answers to such questions as, "Can I hear with a hearing aid?", "What if I cannot use an aid?", "Where do I go for help?"

Among many other important questions considered are common causes of impaired hearing and medical treatment, surgical procedures used to cure or relieve impaired hearing, improvements in hearing aids, need for school hearing testing and speech therapy programs, contribution of hearing rehabilitation centers, and speech and hearing therapy for adults.

MOST POPULAR PAIR!

A DOCTOR REMEMBERS. By Edward H. Richardson, M.D.
The Vantage Press, Inc. New York 1, New York 1959, 252
pages \$3.95.

Reviewed by DENIS S. O'CONNOR

While the author disclaims this work as an autobiography, the book is essentially autobiographical and it is interesting for several reasons.

It gives a rather accurate picture of what a boy was up against in his preparation for the practice of medicine in the early part of this century.

The author's training under Osler, Welch, Halstead and Kelly enables him to record personal incidents about these medical greats.

He witnessed the change at Johns Hopkins Medical School from the practitioner type of clinical teaching to the full time system which created such a stir in the early nineteen hundreds. The chapter devoted to his vigorous disagreement with the full time system can well be understood by those of us who have experienced the same full time system here at Yale and his discussion is a devastating indictment of the plan.

Even if the subject matter of this book was of no interest, it could be recommended to anyone interested in writing for its interesting style, wide vocabulary and its expressive choice of qualifying adjectives.

CLINICAL OBSTETRICS AND GYNECOLOGY. Volume 1, Number 3. A quarterly book series; Copyright 1958 by Paul B. Hoeber Inc., Medical Book Dept. of Harper & Brothers, September 1958 issue, over 1,100 pp. \$18.00.

Reviewed by HARRY A. CONTE

This book is composed of two symposiums: Each symposium is presented by an editor who is assisted by men who are renowned specialists and leaders in the field of obstetrics and gynecology.

Symposium No. 1: Special Diagnostic Aid-Editor C. Paul Hodgkinson, M.D. The author goes into detail description of the developmental stages of Cancer of the Cervix, Early Invasive Stage.

CANCER OF THE CERVIX-DIAGNOSTIC MANAGEMENT

1. History. The advent of metrorrhagia-post menopausal bleeding. Change in the character of the vaginal discharge are reportable symptoms that require examination and appropriate diagnostic measures.
2. Pelvic examination should be thorough.
3. Cell smear. This is a clinical test easy to take. However interpretation is far from simple.
4. Punch biopsy. This requires no anesthesia it is unusual to see significant bleeding. There is no danger of disseminating cancer if present.
5. Coning biopsy. Devised to sample the trigger zone at the squamo columnar junction.
6. Curettage is mentioned as the final adjuvant in the early diagnosis of cancer of the cervix.

ADENOCARCINOMA OF THE ENDOMETRIUM

1. History very important.
2. Cytologic Cell Smear. This test is very reliable if the smear is obtained by aspiration of the secretum high in the canal or even better if obtained from the endometrial cavity.



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3. Endometrial biopsy.
4. Diagnostic curettage. This is of great benefit because of the promptness, safety and efficient disclosing of its etiology. In addition its therapeutic benefit for benign forms of bleeding is well known.
5. Hysterogram. The author disapproves because of the danger of dissemination if cancer is present.

Symposium No. 2: Symposium on Abnormal Uterine Bleeding. Edited by J. J. Brewer, M.D.

A comprehensive discussion of the cause of abnormal bleeding is presented by six papers written by men who are prominent in the specialty of obstetrics and gynecology.

They stress the fact that abnormal bleeding is the most frequent complaint of gynecological patients possibly excepting leucorrhea. They say cancer, until proven otherwise, comes to the mind when this symptom is present.

Chapter one deals with the causes of abnormal uterine bleeding. They stress the importance of history, such as age, menstrual history and existence of pregnancy.

Bleeding in pregnancy in the early stages may be caused by implantation bleeding, abortion, incomplete abortion, ectopic pregnancy, abdominal pregnancy.

The succeeding chapters deal in methods used in diagnosis of abnormal bleeding; as genital bleeding during infancy and childhood. Management of abnormal uterine bleeding during climacteric-post menopausal bleeding, psychosomatic aspects of uterine bleeding functional uterine bleeding.

This quarterly symposium portrays the latest methods of diagnosing and treating the abnormal conditions encountered in obstetrics and gynecology. It is invaluable to the specialist and of great importance to the general practitioner who may be interested in obstetrics and gynecology.



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Chest Blow May Start Arrested Heart

A fast blow on the chest may start a heart beating after it has suddenly stopped, an Oregon physician said recently.

Writing in the current Journal of the American Medical Association, Dr. John T. Brandenburg, Medford, reported a case of cardiac arrest—in which the heart suddenly stops for no apparent reason—that was treated by three strong blows on the left side of the chest.

The most frequently reported means of treating cardiac arrest is by opening the chest and massaging the heart. However, this must be done within four minutes. If the brain is without blood for more than four minutes, irreparable damage will occur.

Dr. Brandenburg's patient was a 64-year-old man who suffered a heart attack on the golf course. Shortly after he arrived at the hospital, he suddenly announced that he was "passing out."

No pulse could be felt and heart tones that had been clearly heard a minute before were absent. "A diagnosis of death due to cardiac arrest was made and thoughts of immediate thoracotomy were entertained," Dr. Brandenburg said.

However, he remembered that other doctors had advised chest blows, and he struck three blows with his clenched fist.

"Just after the third blow, to my delighted surprise," Dr. Brandenburg said, "a strong, but very irregular pulse was felt which soon became regular."

The total period of cardiac arrest was less than one minute. About 10 seconds after the return of his pulse, the patient regained consciousness with the comment, "I must have passed out."

The patient was treated routinely and recovered uneventfully.

Drugs To Be Studied For Effect In Arthritis

The effects of various drugs in treatment of rheumatoid arthritis will be studied in several thousand patients, Dr. R. W. Lamont-Havers, medical director of the Arthritis and Rheumatism Foundation, revealed at a press conference in Washington, D. C. The projected study will utilize the facilities of 10 clinics and will be financed by the National Institute of Arthritis and the Foundation.

Details of the study, to be planned by the American Rheumatism Foundation, will be worked out with the organizations involved in New York during January. It is expected that gold salt will be the first of several drugs to be evaluated. (*Reprinted from Scope Weekly courtesy of Upjohn.*)

MAURICE J. STRAUSS, M.D.

Born in New Haven, Connecticut, January 3, 1893

Died in New Haven, Connecticut, February 2, 1958

Pre-Medical Education, Yale University, 1914

M.D., College of Physicians and Surgeons, Columbia University, 1917

Internship: Bellevue Hospital, New York, 1917-1918

First Lieutenant, Medical Corps, U. S. Army, 1st World War 1918-1919

Staff Appointments:

Associate Attending Dermatologist, to the Dispensary of the New York Post-Graduate Hospital and Medical School, 1929-1932

Assistant Clinical Professor of Dermatology, Yale University School of Medicine, 1932-1936;

Associate Clinical Professor of Dermatology, 1936-1943;

Clinical Professor of Dermatology, 1943-1955;

Clinical Professor Emeritus of Dermatology, 1955

Assistant Attending Physician in Dermatology, New Haven Hospital and Dispensary, 1932-1937

Director of New Haven Municipal Venereal Disease Clinic, 1920-1945

Attending Dermatologist, Grace Hospital, 1928-1958; and Hospital of St. Raphael, 1931-1958

Consultant in Dermatology, Laurel Heights Sanatorium, Newington Veterans Administration Hospital; New Britain Hospital; Griffin Hospital and Norwich State Hospital

Fellow in Dermatology and Syphilology of the New York Academy of Medicine

Diplomate, American Board of Dermatology

President, New Haven Medical Association, 1941

President, New England Dermatological Society, 1951-1952

Member: American Medical Association

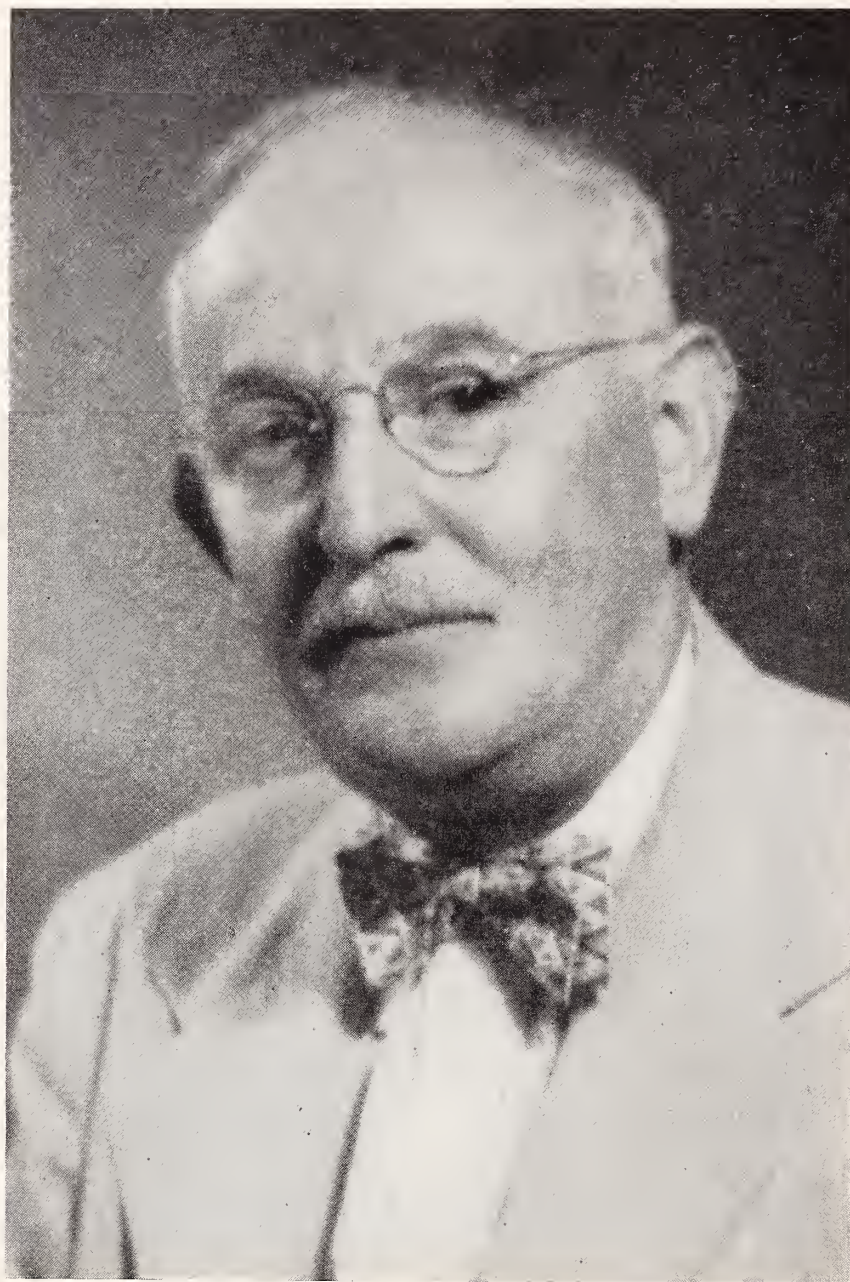
Connecticut State Medical Society

New Haven County Medical Association

Phi Beta Kappa and Sigma Xi

New York Academy of Sciences

American Academy of Dermatology



MAURICE J. STRAUSS, M.D.
1893-1958

CONNECTICUT MEDICINE



VOLUME 23

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An Appreciation . . .

Maurice J. Strauss, M.D.

1893-1958

Dr. Maurice J. Strauss died on February 2, 1958, after a long illness. He was a distinguished dermatologist and teacher, a good friend, and a devoted husband and father, and his passing is a great loss.

Dr. Strauss, known to his friends as Maury, was born in New Haven, Connecticut, January 3, 1893, the son of Jacob Strauss and Theresia Herrman. He received his B.A. from Yale University, in 1914, and his M.D. from the Columbia University College of Physicians and Surgeons, in 1917. In 1923 he married Carolyn Ullman. Their son, John Steinert Strauss, is a dermatologist of promise.

Maury had a rapid rise in the dermatologic firmament, having begun at the bottom of the ladder as Clinical Assistant in Dermatology and Syphilology at the New York Post-Graduate Hospital and Medical School in 1927, a position he held until 1929. From 1929 to 1932 he was Associate Attending Dermatologist to the Dispensary of that institution. In June, 1932, he began his career at Yale University School of Medicine as Assistant Clinical Professor of Dermatology, and in 1943 he became Clinical Professor of Dermatology, a position he retained until 1955, when he was made Clinical Professor Emeritus of Dermatology. He held numerous hospital appointments, the chief of which were Attending Physician in Dermatology, New Haven Hospital and Dispensary, 1932-1937, and Attending Dermatologist to the Grace Hospital, from 1928. He was the Director of the New Haven Municipal Venereal Disease Clinic from 1920 to 1945 and consultant to a number of hospitals in the environs of New Haven. He was a member and officer of numerous societies, including New Haven Medical Association, Vice-President, 1940, and President, 1941; New Haven County Medical Association; Connecticut State Medical Society; Section on Dermatology and Syphilology of the Connecticut State Medical Society, Chairman, 1937; American Medical Association; New England Dermatological Society, Vice-President, 1951, and President, 1951-1952; Atlantic Dermatological Conference; New York Academy of Medicine, Fellow in Dermatology and Syphilology; Diplomate, American Board of Dermatology and Syphilology, Society for Investigative Dermatology; American Academy of Dermatology and Syphilology; American Academy of Compensation Medicine; Phi Beta Kappa; Sigma Xi; New York Academy of Sciences, and the Faculty Club. During World War I he was a lieutenant in the United States Army.

Strauss's contributions to the literature of dermatology were significant. His forty publications dealt with both the venereal diseases and certain aspects of

skin diseases. He was among the first to recognize the epidermal sensitizing potentialities of streptomycin. He also added to our knowledge of toilet-water dermatitis, Carbowax sensitization, and group sensitivity to local anesthetics and certain drugs, such as mercuric iodide and tripeleennamine (Pyribenzamine). He made basic investigations with the Frei test with both the bubo antigen and the mouse-brain antigen. His studies of onycholysis and onychomadesis, as well as of bullous lichen planus, are excellent sources of reference on these subjects. Strauss made clinical studies on therapy, including newer methods of treatment of fungal infections, massive arsenotherapy for syphilis, and "intraderm sulfur." His last three years of active work were devoted to his most important contribution, an intensive study of the cause of human papillomas, warts, and molluscum contagiosum, with his colleagues at Yale University, Drs. William G. Banfield, Henry Bunting, and Joseph L. Melnick. This collaboration resulted in a series of seven widely quoted publications.

Maury Strauss had a most charming and warm personality. During a long and painful illness he displayed courage and almost superhuman endurance. He had a ready chuckle and quick wit. He was soft spoken but always made a definite contribution to the matter at hand. He was slight of build, mustached, and had a penchant for bow ties. He was a devoted family man; to be in his home for a few minutes was enough to recognize the love and respect of the father, mother, and son for one another. His character and career were definite inspirations to his son.

Maury Strauss knew how to play, was a bibliophile, loved travel, and had several hobbies, including cooking, philately, and photography. Many times he phoned me from New Haven not to try a certain recipe or to direct my attention to a particularly good concoction that he had come across. In 1952 he and his wife, Carolyn, began a collection of postage stamps illustrating or commemorating medical and allied subjects. This collection, which included stamps from over fifty countries, created wide interest in philatelic circles. It was exhibited in public institutions, including the Yale Medical Library and the Smithsonian Institution, in Washington, D. C., and was described in a number of philatelic publications. Dr. Strauss was awarded second prize by the Committee on Exhibits at the American Academy of Dermatology and Syphilology for this stamp collection. Dr. Strauss prepared his own teaching slides and much photographic material for publications.

Rabbi Robert E. Goldberg, who officiated at Dr. Strauss's funeral, epitomized his career and personality in a few words: "He was high minded—there was nothing partial in all that he was. He was kind, gentle, and considerate not when the spirit moved him, but rather as an integral part of his character. He could not be otherwise. It was the same with all the beautiful qualities with which he was endowed with generous abundance. Maury had an easy dignity, never a pose or an affectation, as he had wit, charm, and humor. He was easy to like, wonderful to know, and worthy to cherish. His death is a loss because his life was such a long blessing to the community in which he lived."

HERMAN BEERMAN, M.D.

Lichen Planus Of The Lip Mimicking Cancer Or Precancer

MARION B. SULZBERGER, M.D., F.A.C.P.*

VICTOR H. WITTEN, M.D.

New York, New York

By presenting these two brief case reports we hope to call attention to atypical lesions of a rather common benign dermatosis which could readily have been confused with cancer of the lip. The absence of characteristic diagnostic features at the site of primary involvement and the initial freedom of all other accessible skin or mucous membrane surfaces made it impossible to establish the correct diagnosis on clinical grounds alone. At first the history and physical findings in each case suggested diagnoses which could have lead to unnecessarily radical surgical procedures. By virtue of time, patience, repeated clinical examinations and various laboratory studies the correct diagnoses were finally established and paved the way for appropriate management of each case.

CASE 1

A white female, age 43, was first seen in January 1950 complaining of tenderness and frequent bleeding from several persistent scaly areas of the lower lip. The lip had been quite healthy until one year before when it was injured by a blow, following which it suffered several more traumatic experiences.

On examination the lower lip showed scaling, crusting and some small areas suggestive of leukoplakia. There was slight induration. No other lesions were found on the oral mucosa or elsewhere on the body surface.

Because of the chronicity of the involvement and the associated clinical features it was necessary to consider the possibility of leukoplakia or early squamous cell epithelioma. An excision biopsy was made and the histopathologic findings were reported by Dr. Charles F. Sims as follows:

"The epidermis is absent in most of the section. Where it is present it is irregular but otherwise reveals no abnormal proliferation. A diffuse cellular infiltration is noted in the upper corium composed of small, round wandering connective tissue

and polynuclear cells. The superficial vessels are dilated." Histopathologic diagnosis: "Non-specific ulcer."†

A battery of serologic tests was negative for syphilis.

In May 1950 we presented the patient at the Combined Conference for Visible Tumors of the Skin and Mucous Membranes at the New York Skin and Cancer Unit where she was seen by other dermatologists, pathologists, surgeons and radiologists. One of the surgeons stated that similar ulcers are often seen in the surgical clinic where a diagnosis of "cheilitis" is made for want of a better name. While some cases do respond to x-ray or radium, in the severe and resistant cases the involved surfaces of the lower lip are usually excised and normal mucosa is slid forward from the inner aspect of the lower lip to cover the defect. He stated further that they are surprised every once in a while to find that the excised mucous membrane shows an early rest of malignancy on microscopic examination.

At this conference a clinical diagnosis could not be made. It was recommended that the area be re-examined regularly and that another biopsy be done at a later date if the lesions failed to improve.

Various forms of therapy brought only temporary improvement, followed by relapse with fissuring and then crusting.



FIGURE 1.

Histopathologic section from biopsy of buccal mucosa of Case 1 showing lichen planus.

* It is a privilege to have the opportunity to contribute to this issue in memory of my respected colleague and dear friend Maurice Strauss and this article is a token of my affection for him and his family.

MARION B. SULZBERGER.

† When serial sections from the original biopsy were restudied recently (at the time of preparation of this report) with the knowledge that a diagnosis of lichen planus had been established, areas suggestive of lichen planus were found.

In May 1951 an annular reticulated whitish area was noted on the left buccal mucosa for the first time. A punch biopsy (Fig. 1) taken from this site was reported by Dr. Arthur B. Hyman as follows:

Microscopic description: "A horny layer is present and is partly edematous. The granular layer is seen in part. The epithelium shows some acanthosis, and the rete pegs are small and toothed. The papillae are domed. An infiltrate of small, round cells limited to the upper corium lies close to the basal margin.

Microscopic diagnosis: "Lichen planus."

In June 1951, armed with this biopsy report the patient was re-presented at the Tumor Conference at the New York Skin and Cancer Unit. In that a definite clinical diagnosis of the lower lip involvement still could not be made, the following was suggested: (1) that another biopsy be taken from the border of the lesion to rule out possible malignancy; (2) administer small doses of x-ray as for the treatment of lichen planus; and (3) perform a sliding graft.

It was decided to treat the lesion as though it was lichen planus. Grenz radiation and then bismuth orally were administered each only with moderate success. In October 1953, because of the failure of the area to heal, the patient was presented once again before the Tumor Conference. It was the consensus of that Conference that all forms of both topical and systemic therapy should be carefully tried before subjecting the patient to surgical repair of the area. It was recommended that the site be regularly observed in order to discover the beginning of possible malignant changes.

The therapy which helped the most was Bistri-mate* by mouth and the topical application of hydrocortisone ointment. These benefits were furthered by the administration of grenz radiation.

At no time did other lesions of lichen planus appear elsewhere over this patient's cutaneous surface. When last seen in August 1954 the ulcer had healed and the lower lip was comfortable but showed some residual whitish areas.

CASE 2.

This 73 year old white male was first seen in February 1958. Six weeks before he had noted dryness and chapping of both lips but particularly of the lower lip. This was followed by annoying fissures in the lower lip. He gave a history of having had many "cold sores" of the area over the years as well as repeated sun exposures. No local trauma could be ascertained other than smoking (cigarettes). Possible allergenic contact agents

* Sodium bismuth triglycollamate (Carroll, Dunham, Smith).



FIGURE 2.

Clinical appearance of lower lip of Case 2. Not typical but suggestive of lichen planus.

were considered but could not be verified by careful studies.

On examination the primary involvement was of the lower lip which was extremely dry and presented several fissures and an area of ulceration. (Fig. 2). The teeth were in good repair and "all his own." The oral mucous membranes were free of involvement as was the patient's skin. Local therapy was soothing but not curative. Two applications of thorium X were of no help.

In June 1958 two white, slightly raised, and somewhat lace-like plaques were noted on the right buccal mucosa. The diagnosis of lichen planus was considered. A course of grenz radiation to the lower lip was temporarily beneficial.

In July 1958 several isolated papular lesions highly suggestive of lichen planus were first noted on the forearms and left shin. A biopsy (Fig. 3) of one of the forearm lesions was reported as follows by Dr. Arthur B. Hyman:

Microscopic description: "The horny layer is



FIGURE 3.

Histopathologic section from biopsy of papule from forearm of Case 2 showing lichen planus.

relatively thick. The granular layer is present. The epidermis is thin and small, jagged rete ridges are seen. The basal margin is washed out by a band of inflammatory infiltrate, sharply limited to the uppermost cutis.

Microscopic diagnosis: "Lichen planus."

Because the lips were kept comfortable and the lesions held under good control by the application of a 0.1 per cent triamcinolone acetonide ointment alternating with the use of a colorless lubricating lipstick* incorporating 2½ per cent hydrocortisone, no other therapy was attempted. The patient had stopped smoking. The papules on the extremities disappeared with the exception of two which remained very suggestive of lichen planus. In March 1959 the lip was still under excellent control with the therapy mentioned. A few weeks later following several weeks of exposure to the sun and laxity in topical therapy, some dryness and fissuring recurred.

* * *

DISCUSSION

Lichen planus of the mucous membranes, particularly of the mouth is not at all uncommon and this applies as well to involvement of the lips, including the vermilion borders. When the clinical diagnosis of lichen planus is *clear cut*, either because of the diagnostic morphology of the lip lesions, or because of other typical lesions of lichen planus elsewhere on the mucous membranes or glabrous skin, there will be no doubts such as those which were at first present in our two cases.

However when the lower lips alone are involved

and the eruption is not precisely characteristic for lichen planus there are a few serious conditions which must be considered in differential diagnosis. These include leukoplakia and early prickle cell epithelioma. Obviously the early and precise diagnosis in this situation is essential in order to save the patient's life or appearance or to spare him unnecessary radical surgery.† In both the cases here reported the changes were suggestive of early leukoplakia or epitheliomatous involvement. Because of the marked resistance to therapy, surgical intervention was at first suggested but fortunately not carried out precipitately. Surgical and destructive measures not only proved unnecessary but might well have resulted in even more troublesome lips, due to possible recurrence and greater involvement by lichen planus based on a local isomorphic response (Koebner phenomenon) in the sites of surgical trauma.

* Lip Ade (Roger-Gallet).

† The important fact that lichen planus of the lip does not preclude the subsequent development of malignancy in the same area was recently once more called to our attention by the following case: A 59 year old male referred to us in June 1958, had a definite history of lichen planus of 20 years duration and typical lichen planus lesions of the glabrous skin when lesions appeared for the first time on the lower lip. Four different biopsies of the lip lesion taken at various intervals during the last 12 months showed lichen planus histopathologically without any evidence whatsoever of malignancy. Within one and a half years after the onset of the lip lesions, malignancy of the area was proved and surgical extirpation was necessary. It is, of course, impossible to conclude whether the malignancy was in any way associated with the lichen planus of the area, or whether the x-ray (amount unknown) given many years before to the lip as therapy for the lichen planus in any way contributed to the malignancy.

BEWARE THE NEW WORKMEN'S COMPENSATION LAW!!!

Effective October 1, 1959, the Connecticut Workmen's Compensation Law has been amended to a compulsory act and requires *any* employer having two or more employees to purchase Workmen's Compensation Insurance.

In determining the number of employees, an employer must count not only those at his office but also employees at his home including part time employees such as a cleaning woman, lawn boy or baby sitter. Even a part time employee working only one hour a week must be included. A casual employee such as someone hired to clean up the yard once a year does not need to be counted.

Failure to comply with this new law makes the employer liable for a substantial fine and, of even greater importance, liable for the medical expenses of the injured employee plus 55 per cent of weekly wages for the duration of disability.

All members of the Society are urged to take cognizance of this law and act accordingly to protect themselves.

Initial Symptomatology In Brain Tumors

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New Haven

THE importance of early diagnosis in most forms of neoplasia has been strongly emphasized in both the popular and professional literature during recent years. Early symptoms of the more common types of carcinoma not infrequently invade our living rooms by way of the radio waves. Yet one seldom encounters a compilation of information regarding heralding symptoms of brain tumors. The over-all incidence of such neoplasms^{1,9} is about one per cent, approximately the same as that of carcinoma of the stomach, colon, rectum or breast. Furthermore, about 40 per cent of brain tumors are potentially curable,² the outstanding examples being meningioma, acoustic neurinoma, pituitary adenoma and cerebellar astrocytoma. All these are lethal or productive of blindness unless treated at a reasonable interval before the "bitter end." Another 20 per cent of brain tumors are capable of palliation for periods of five or more years.⁵ There should be no doubt that early diagnosis is highly desirable. The purpose of the present paper is to indicate the earliest symptoms in a series of brain tumors from the Cushing and Yale series.

Meningiomas are benign, curable tumors which produce symptoms largely in relation to their loca-

tion. The following data (Table 1.) was extracted from the splendid monograph of Cushing and Eisenhardt,³ based upon 295 meningiomas. Occasionally multiple initial symptoms were recorded. Symptoms worthy of special note in early diagnosis are indicated in bold-face type. The combination of any of these symptoms with the ubiquitous headache should arouse strong suspicion of this very favorable type of brain tumor.

Acoustic neurinomas are benign tumors, occurring chiefly in the third to sixth decades, with a 65 per cent predisposition in females. The initial symptomatology recorded in Table 2 was obtained

TABLE 2.
ACOUSTIC NEURINOMAS

FIRST SYMPTOM	PER CENT
Deafness	46
Tinnitus	30
Headache	12
Unsteadiness	10
Dizziness	6

from a random sampling of 50 cases. The onset of deafness and tinnitus during the middle decades, especially in women should cause one to think of this tumor, where early diagnosis is the first step toward a permanent cure.

Pituitary adenomas tend to produce two types of symptomatology. The earliest symptoms, often subtle, usually relate to the endocrine functions of the pituitary gland. Later, though frequently the first specific complaint of the patient, come visual disturbance and headache. Thus Nurnberger and Korey⁷ reported the presenting symptoms in a series of 117 chromophobe adenomas as follows: Visual disturbances, 47 per cent; headache, 20 per cent; sexual dysfunction, 17 per cent. Endocrine symptoms are likely to occur in constellations, related to the pituitary itself, plus the effects upon the specific target organs: Gonads, thyroid and adrenals, in that order.⁸ Table 3 illustrates the significant endocrine symptomatology in 100 cases of chromophobe adenoma⁶ and 100 cases of acidophilic adenoma.⁴ It should be possible to suspect the diagnosis and institute appropriate treatment in many of these cases prior to the development of visual impairment. X-rays of the skull will demon-

TABLE 1.
MENINGIOMAS

LOCATION	CASES	FIRST SYMPTOM	PER CENT
Parasagittal	65	Headache	42
		Convulsion	29
		Exostosis of skull	23
		Paresis and mental	24
Convexity	54	Convulsion	48
		Headache	37
		Exostosis of skull	8
Sphenoidal Ridge	53	Headache	34
		Proptosis	28
		Visual disturbance	25
Olfactory Groove	29	Headache	47
		Visual disturbance	35
		Mental	25
Suprasellar	28	Visual disturbance	93
Subtentorial	23	Headache	50
		Deafness	23
		Tinnitus	18

* I appreciate the opportunity of contributing to this deserving recognition of my good friend Maury Strauss.

TABLE 3.
PITUITARY ADENOMAS
ENDOCRINE SYMPTOMS

CHROMOPHOPE:	PER CENT
Disturbed menstrual cycle	78*
Subnormal metabolic rate	77
Fine texture of skin	81
Diminished potentio sexualis	71†
Diminished libido sexualis	62
Fine texture of hair	55
ACIDOPHILIC:	PER CENT
Enlargement of acral parts	100
Disturbed menstrual cycle	87*
Complete amenorrhea	73*
Increased metabolic rate	70
Excessive perspiration	60
Hypertrichosis	53
Cutaneous pigmentation	46
Diminished libido sexualis	38

* % of females.
† % of males.

strate enlargement of the sella turcica in 90 per cent.

Cerebellar astrocytomas are the most favorable of all the gliomas. They occur chiefly during the first three decades of life and their curability is highly dependent upon early diagnosis. The initial symptoms in 50 cases chosen at random are shown in Table 4. The combination of headache with

TABLE 4.
CEREBELLAR ASTROCYTOMAS

FIRST SYMPTOM	PER CENT
Headache	50
Vomiting	50
Unsteadiness	16
Tilting of head	12
Dizziness	6

any of the other symptoms here noted is ample indication for neurosurgical consultation. It is of course likely that a cerebellar tumor of another type, such as hemangioblastoma (favorable) or medulloblastoma (unfavorable) will give rise to similar symptomatology.

Cerebral astrocytomas are considerably less favorable than their cerebellar counterparts, having a

TABLE 5.
CEREBRAL ASTROCYTOMAS

FIRST SYMPTOM	PER CENT
Convulsion	48
Headache	38
Vomiting	6
Visual disturbance	6
Weakness	6

five year postoperative survival rate of 15 per cent. It is highly likely that more favorable results could be obtained with earlier diagnosis. Table 5 illustrates the more common initial symptoms in 50 cases selected at random. These tumors have their major incidence in the third to sixth decades. Certainly any patient developing convulsions during this period of life, especially if accompanied by headaches, deserves immediate consideration.

COMMENT

It is obvious that a statistical survey of this type, while supplying useful information in the sphere of probability, does not exclude less likely modes of onset. Thus, even acoustic neurinomas, noted for their consistent symptomatology, may have such unusual initial symptoms as mental disturbance, vomiting, blurring vision, twitching of the face, (four per cent each) and weakness, lethargy, diplopia, nausea and numbness of the face, (two per cent each). Ultimate diagnosis is dependent upon many factors: Age of the patient, symptom chronology, constellations of symptoms and signs, the results of special diagnostic procedures. However, the important goal of early diagnosis can be attained only when the first physician who attends the patient considers the possibility with a reasonable degree of suspicion, uncolored by the still too prevalent attitude of deep pessimism regarding treatment. It is true that many brain tumors appear to justify this pessimism but, as indicated previously, 60 per cent have a better prognosis than most types of carcinoma, if diagnosed sufficiently early.

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Some Investigative Problems Of The New Oral Fungistatic Agent, Griseofulvin

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DR. Maurice Strauss was always an able and enthusiastic clinical investigator. In 1950, he wrote about the chemotherapy of blastomycosis with a new and different chemotherapeutic agent. Actually, this was the first development of the modern chemotherapy period for the deep mycoses. Following this came rapidly, stilbamidine and its derivatives, and finally, the antibiotic antifungal agents. For blastomycosis, soon the highly effective amphotericin-B was developed.

It is quite proper then, at this time, to review our experiences with this new fascinating antibiotic antifungal agent, griseofulvin. Twenty years ago, this was isolated originally by Oxford and his associates,^{1,2,3} and later by other workers, from various species of penicillium, patulum, janczewski, and griseofulvin. Save for its use as an agricultural fungicide, it was forgotten. As recently as July, 1957, in an important international conference on mycotic infections, in London, this antibiotic antifungal agent was not even mentioned. Gentles,⁴ in 1958, deserves credit for the introduction of this oral antibiotic into the field of mammalian fungous infections. His work was soon followed by world-wide clinical studies in man. Today, the development of griseofulvin is one of the significant features of modern dermatology.

The experiences of Pardo-Castello,^{5,6} Riehl,⁷ Williams⁸ and her co-workers, Blank and Roth,⁹ and many other workers in this country and abroad confirm the value of this oral agent in selected superficial fungous infections. Our own experiences have included 243 patients.¹⁰ I should like to review here, or rather note some of our research studies which are of interest.

One early phase of research with griseofulvin was, of course, the controlled clinical experiment. To date, it may be said dogmatically, that oral griseofulvin can cure superficial fungous infections of the scalp caused by such common fungi as *M. Audouini*, *M. canis*, and *T. tonsurans*. There has been some experience also in the *Favus* group, including our own studies. Even with tinea capitis the dosage routine is not yet fixed or routine. The usual dosage is 250 mgs., four times daily, for the

adult; half the dosage for the child. The average duration of treatment is two to three weeks, depending upon the mycologic control of the patient. We, too, have done experiments with an initial single dose of 500 mgs. in a child. Some of the results have been successful after a prolonged observation period.

The next fascinating field is the fungous infections of the smooth skin. Here, with the exception, unfortunately, of the common *Tinea versicolor*, the reactions are again brilliant with the same average dosage schedule. However, when we get into the field of the *Trichophyton rubrum* infections, the treatment is, of necessity, much more prolonged. The systemic background of these patients as regards such diverse factors as diabetes, Cushing's disease, and the like, must be studied. *Trichophyton rubrum* infections remind us of the systemic background of cutaneous moniliasis, especially in children. It is the systemic factor which makes the keratin more susceptible to prolonged infection.

The next field is the tinea pedis, and here we still have many clinical problems which must be worked out,—the effect of griseofulvin on the actual pathogen, its allergic reactions to the fungus, the carrier state, as expressed by Andrews,¹¹ and the relationship between the fungus and lesions of so-called dysidrosis. We would agree with the other investigators that the skin surface can be rendered free of fungi fairly rapidly. Whether the clinical picture also changes in some patients is another story. Griseofulvin should be used in tinea pedis but the duration of therapy should be controlled by mycologic studies and the clinical course.

One of the most exciting fields is in the fungous infections of the nails. Here, people who have had what used to be considered as incurable, long standing nail deformities of bizarre natures, can secure marked improvement of the nails. The treatment however, must be prolonged with oral dosage taken for as long as four to six months, and sometimes longer. In this field the clinical differential diagnosis is difficult and we have adapted the rule of a trial period of adequate oral dosage for six weeks to determine any evidence of initial improvement. If there is none, and laboratory studies indicate that this is not a mycotic infection, then it is questionable whether therapy should be continued.

From the Department of Dermatology, University of Cincinnati College of Medicine. Griseofulvin for these studies furnished as Fulvicin by Harry V. Pifer, Jr., M.D. and G. Kenneth Hawkins, M.D., Division of Clinical Research, Schering Corporation, Bloomfield, New Jersey.

TABLE 1
SUMMARY OF 118 PATIENTS WITH FUNGUS INFECTIONS TREATED WITH ORAL GRISEOFULVIN

ORGANISM	NUMBER OF PATIENTS	AVERAGE DOSAGE	AVERAGE DURATION	RESULTS	REACTIONS
M. audouinii	26	250 mgs t.i.d.—b.i.d. 13—one single dose 5 grams (investigative study only)	3-4 weeks	All cleared — save 1 in the 5 gram series	None—save inconstant gastric disturbances; blood studies 0
M. canis	8	250 mgs t.i.d.—b.i.d.	3-4 weeks	All cleared	None
T. rubrum	58	250 mgs t.i.d. Initial dose in severe cases 250 mgs q.i.d.	Localized — 6 weeks generalized and severe 8-12 weeks nail involvement 4-8 months	All improved, all localized cleared	2 relapses on stopping therapy; headache — 3, mild gastric disturbances —4
T. mentagrophytes	19	250 mgs t.i.d.	3-6 weeks—except in nail involvement 4-8 months	Cleared except in nail involvement	No reactions — severe enough to stop therapy— anorexia-1; hot feeling in stomach-1; nervous and upset-1
A. schoenleini	2	250 mgs t.i.d.	Under observation 3 weeks only	Improved	
T. tonsurans	1	250 mgs-500 mgs t.i.d.	3 weeks	Cleared	
M. furfur	2	250 mgs t.i.d.	3 weeks	No better	
Candida albicans	2	250 mgs t.i.d. (paronychia)	3 weeks	No better—1 Aggravated—1	

Series includes only those patients in whom positive cultures were obtained. Patients with negative cultures or with saprophytes not included in this series.

Another field of investigative studies relates to the field of topical medication with griseofulvin. In the hands of many of the investigators results have been somewhat disappointing. Its activity as a topical agent has apparently not been found any more effective than the usual available topical fungicides. This problem has intrigued us a great deal. For obvious reasons, in many instances topical therapy would seem more suitable. Since griseofulvin has no effect against *Candida* or against bacteria, obviously, a topical agent which has materials in it to combat these infections would be of considerable interest. There is, indeed, some suspicion that after oral griseofulvin therapy of lesions in intertriginous areas there is an overgrowth of *Candida*. We have done experiments in 125 patients with griseofulvin added to new types of surfactants and have found some interesting results in *Trichophyton rubrum* infections, *T. mentagrophytes*, and also, most curiously, in *Tinea versicolor*. Because of the necessity of good controlled observations, these experiments must be repeated with various effective control agents in the vehicle. We are also doing diffusion experiments in media with topical griseofulvin. One of the difficulties of studying the mechanism of topical infections is the lack of complete understanding of the metabolism of

griseofulvin in keratin. Investigators have found after oral use griseofulvin is present in keratin and not in the fungus. What metabolites are effective, we do not know. Experiments have been done with Cl^{14} labelled griseofulvin. A better understanding of the distribution patterns of griseofulvin, the metabolites, and the mechanism of keratin diffusion will help to solve the much needed problem of increasing the efficiency of topical griseofulvin. There is another fascinating field of investigative study, namely, the effect of griseofulvin on the fungus itself. It can be stated that this new antibiotic will indeed produce a renaissance, and a much needed renaissance of medical mycology. It is impossible to treat cases adequately with oral griseofulvin without good mycologic control studies. The technics are simple, but not known or appreciated by many laboratories and by many pathologists. The number of trained medical mycologists in medical mycology laboratories is indeed pitifully small. This antibiotic acts as a fungistatic, not a fungicidal agent, and causes peculiar deformities in the fungus elements.¹² Although it may be possible, according to the studies of Robinson,¹³ for fungi to develop resistance to griseofulvin in cultures, it is not always true for *T. rubrum*. Yet, from clinical experience with repeat cultures in

TABLE 2
SUMMARY OF 125 PATIENTS WITH SUPERFICIAL FUNGUS INFECTIONS TREATED WITH TOPICAL GRISEOFULVIN

ORGANISM	NUMBER OF PATIENTS	AVERAGE DURATION THERAPY	RESULTS	REACTIONS
<i>M. audouinii</i>	2	5 weeks	No improvement	None
<i>M. gypseum</i>	1	2 weeks	Cleared	Severe eczematous dermatitis—patch test to griseofulvin o
<i>M. canis</i> (One with kerion)	1	2 weeks	Cleared—had also oral griseofulvin 250 mgs b.i.d.	Severe eczematous dermatitis—patch test to griseofulvin o
<i>M. furfur</i>	20	3-6 weeks	18 patients better, 2 patients no response; flare after medication stopped	None
<i>T. rubrum</i> (localized)	14	6-8 weeks	All improved; flare in 3 after medication stopped	Dryness and scaling of skin in intertriginous area
<i>T. mentagrophytes</i>	42	3-8 weeks	All improved on medication; 5 not improved on control alone; 50% flared after medication stopped	1 eczematous dermatitis, patch test to griseofulvin o; some dryness of skin in intertriginous areas
Tinea Pedis (clinical) cultures for fungi negative	37	3-6 weeks	Most improved including 3 with severe secondary pyogenic infection	None
<i>C. albicans</i>	8	2 weeks	5 improved (and cultures became negative) 3 flared (infra-mammary, axillary)	

Topical griseofulvin was used as investigative material in lotion or ointment in concentration 0.5-1.0% b.i.d. or t.i.d. No control studies on the vehicle alone included in this series.

patients who have had flares under repeated courses of griseofulvin, we have not found any indication of resistance induced in these fungi, *T. rubrum*, *T. mentagrophytes*, and *M. audouinii*. What the mutants induced in fungi will do to infection of other individuals, we do not know. What griseofulvin does to the immune mechanism of patients in regard to the superficial mycoses, we also do not know. It is certainly possible that cures with griseofulvin will mean repeated infections in that individual.

An important phase of griseofulvin work now, is the study of its fascinating side reactions. When massive dosages are given intraperitoneally or intravenously in animals, changes are found in the testis and usually not in other viscera. In our Laboratory of Mycology, under the direction of Dr. Jan Schwarz,¹² with dosages of griseofulvin comparable to what we are using in humans, no toxic changes were found in the testis or in other viscera. Likewise, there was no change in the fertility rate of the animals. When massive dosages were given, necrotic areas were found in the testis. Detailed studies on patients receiving the usual dosages of griseofulvin, by Blank, Livingood,¹⁴ and Kilgman, and others, have shown no changes in the sperm count or in biopsies testicular tissue. This study is and should continue to receive considerable atten-

tion. Because of the necessity in some infections, such as *T. rubrum* and onychomycosis, for long continued therapy courses, we must know more about chronic toxicity. Although in animal experiments with massive dosages, griseofulvin can cause cytologic changes in regard to mitoses in some cells, these have not been found as yet in humans. In our studies with the injection of suspensions of griseofulvin into the skin of man, as yet we have found no changes in the mitoses in adjacent hair follicles. Also we have not found any local anti-inflammatory activity. We have not found blood changes in our studies, but some investigators have reported mild leukopenia. It is because of this finding that complete blood counts at intervals of two to four weeks are recommended in prolonged courses.

The other side reactions which should be studied are disturbances of the gastrointestinal tract. Whether these are due to chemical irritation from the griseofulvin or changes in flora (yeasts?), is not as yet known. In our experience, there has been no irritation of acute peptic ulcer. There has been some aggravation of symptoms in patients who have had colitis.

Another phase of the reactions which has interested us greatly is the so-called minor neurotoxic reactions. These have occurred uncommonly in the

form of headaches, fatigue, restlessness, insomnia, and "weepy" feelings. At present, we are doing electro-encephalogram studies in patients pre-, during, and post-treatment, with relatively large dosages of griseofulvin to detect neurotoxicity. So far, none have been encountered.

CONCLUSION

Griseofulvin is a new, highly effective oral anti-biotic. It should be used with an appreciation of its real value but also of its distinct limitations in superficial fungous infections of the scalp, skin, feet, and nails. Griseofulvin is fungistatic, not fungicidal. Some problems requiring further investigation are listed. Good mycologic control as well as good follow-up of the patient is essential.

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The Metabolism Of Scientific Information

At the recent International Conference on Scientific Information, over 900 participants—chiefly active scientists from laboratories throughout the world—met for a full week to discuss ways to promote efficient metabolism of the tremendous masses of information . . . which today are accumulating at an accelerating rate," says Dr. Richard H. Orr. "Many . . . fear that the rate at which scientific frontiers can be advanced is being limited by the inefficiencies of an over-loaded scientific communication system."

Among the many ways to "speed the orderly flow of information" are accuracy, brevity, and clarity in scientific writing and editing. Better cooperation with the abstracting services would also help. Abstracting services are criticized for incomplete coverage and slowness, but besides inadequate financing these services also suffer from a lack of qualified abstracters and translators, "who preferably should be scientists themselves."

Attempts have been made to find new ways of ending the bottleneck in the flow of information. When *Biological Abstracts* requested each author to provide his own abstracts of papers, there were fears that quality would deteriorate; but now, several years later, it is evident that the idea has worked "amazingly well." An increasing number of journals, including *Metabolism*, have been assisting by sending authors' abstracts to *Biological Abstracts*.

In 1958 *Metabolism* initiated the procedure of preceding articles with a summary, recognizing that the summary is the most-read portion of a paper. Too often, however, an author will present a poor summary after having expended his energy on a well-written article. Yet, as the "face" of the author, the summary requires the same meticulous attention as the paper as a whole.

To break the log jam in communication, *Metabolism* permits *Biological Abstracts* to use its summaries as abstracts, in keeping with the recommendations of the Abstracting Board of the International Council of Scientific Unions to establish closer relations between scientific journals and abstracting services. (*Metabolism* 8:187, March, 1959.)

A Tribute to . . .

Maurice J. Strauss

January 3, 1893

February 2, 1958

THE October issue of "Connecticut Medicine" has been prepared to honor and to pay tribute to the memory of Maurice J. Strauss for his contributions to his chosen field of Dermatology and Syphilology, and to the practice of medicine in this state. In this particular tribute we go a step further in recognizing him as a man, a physician, a scientist, and a scholar.

The compilation of scientific papers in this memorial issue attests the continuation of the stimulating influence of Maurice J. Strauss upon his colleagues and friends, both those who were associated with him in his specialty and those who cared for him as a patient during the tragic restrictions placed upon him in the period preceding his demise.

In the 1920's it seemed that many of the younger men interested in dermatology were making frequent trips to the great dermatologic training centers in New York City. On one such trip in 1927 it was my privilege to meet Maury for the first time. His enthusiasm, his keen interest in his chosen field, and his "peppy" nature impressed me. We soon became fast friends and remained so for the rest of his life.

He was a man of many interests, each one of which he pursued to its limits. First and foremost he was a man in every sense of the word. When you came to know him you found him a warm and understanding person, a loving husband and father. He possessed a ready wit; he was quick to grasp the over-all picture of a situation; and he liked to entertain, whether in his home, after a medical society meeting, or elsewhere.

As a physician, he was intensely interested, not only in his professional duties, obligations to his specialty and to his patients, but to his medical society and its related functions. He was not of the "let-George-do-it" type. In his own city he promptly became a member of the New Haven Medical Society and in 1920 he became a member of the New Haven County Medical Association and the Connecticut State Medical Society. In 1933 he became a Diplomate of the American Board of Dermatology after written and practical examinations. How well I remember those experiences as we were in the first

small group of physicians to be admitted as Diplomates of our Specialty Board by examination. In 1934 he became a delegate from the New Haven County Medical Association to the House of Delegates of the State Society. During that year he was most helpful to me in founding the Section of Dermatology of the Connecticut State Medical Society and introduced the resolution into the House of Delegates which officially created the Section of Dermatology. He again served as delegate from New Haven County in 1941, 1942, and 1943. Naturally, Maury became a member of many regional and national medical organizations. This sphere of his activities is related in greater detail in the earlier pages of this memorial issue. For the moment the more intimate and down-to-earth associations seem to transcend all others.

Maury served as a member of the Venereal Disease Control Committee of the New Haven County Medical Association in 1937 and 1938. He had an inherent enthusiasm and a deep and abiding interest in the problems of certain infectious and communicable diseases. In 1940 it was my pleasure to serve with him as a member of the Advisory Committee of the Connecticut State-wide Evaluation Studies of Sero-diagnostic Laboratories. He was also on the Subcommittee of Cooperating Physicians. Much of this toil and effort has long since been forgotten, but the step by step benefits derived therefrom still live on.

As a member of the Committee on Public Health of the State Society from 1940 through 1950, he served as its chairman during 1947, 1948 and 1949. In 1941 he was chairman of the Program Committee of the New Haven County Medical Association. I can well remember that he was frequently concerned in some capacity with the arrangement of programs for both the clinical Congress and the Annual Meetings of the State Society, though he was no longer officially a member of that committee.

During 1947, 1948 and 1949, Dr. Strauss was a member of the Public Relations Committee of the State Society. At this point we might comment that Maury was a diligent but quiet worker in whatever level of medical society functions he took part. One

could always depend upon him to contribute unselfishly of his time and talent, whether it was at the local, county, or state level.

Interests in matters outside his profession were manifest in his civic activities, his now famed collection of medical stamps, and his curiosity concerning old medical books. A Memorial Book Fund has been established in his memory at the Yale Medical Library.

Dr. Strauss' medical stamp collection has been admired by philatelists everywhere. Mr. W. J. Bishop of London, England, recently viewed them and has most graciously submitted a manuscript for this memorial issue. In addition to the exhibition of Maury's medical stamps at the Yale University Medical Library, they have also been shown at the Cleveland Health Museum, the Milwaukee Art Institute, the American Academy of Dermatology in Chicago, and the Smithsonian Institution. Dr. Strauss was awarded prizes in the contests which were held in both Cleveland and Chicago.

As a scientist and scholar, he had wide and varied interests. He was the author of forty papers which were published in numerous medical and scientific journals. His early work with the Frei test, using both the bubo antigen and the mouse-brain antigen, was of considerable importance, especially to dermatologists in this area. Before the advent of the mouse-brain antigen, Maury tried to keep his fellow dermatologists supplied with the bubo antigen until its availability declined to zero in Connecticut where relatively few opportunities existed to obtain fresh antigen. His early recogni-

tion of the epidermal sensitizing effects of streptomycin, local anesthetics, and antihistaminics was only an introduction to his many and varied investigations, too numerous to mention. These scientific endeavors culminated in his outstanding work in which the electron microscope was used in an approach to the study of the cause of human papillomas, warts and molluscum contagiosum. This project was pursued in collaboration with his colleagues at Yale University and resulted in the publication of several papers which were frequently quoted. Thus came about the term "Strauss-Bunting" papilloma. We are indeed fortunate in having one of the contributions to this memorial issue deal with this subject.

Elsewhere in this issue Maury's record is replete with a list of an infinite number of hospital appointments and memberships in numerous medical societies. This aspect of his accomplishments is appropriately revealed on another page of this issue. Although an effort has been made to limit this tribute to the plane of a close personal and professional relationship, at times unavoidable overlapping of facts has crept in; it is hoped that such duplication may serve only to emphasize that which is praiseworthy.

"We live in deeds, not words,
In thoughts, not breaths,
In feelings, not in figures on a dial."

—Festus

ELLWOOD C. WEISE, M.D.
Bridgeport, Conn.

Successful Geriatrics

"The successful geriatrician must be a man of wide clinical experience and should, preferably, have spent several years in general practice—the only sphere of medicine in which he can learn to appreciate the background of the elderly patients for whom he assumes responsibility. He must be sympathetic, kindly and above all he must like old people," notes Dr. I. D. Grant. The question of the care of the aged is of growing importance in Britain today, where 14 per cent of the population is entitled to draw old-age pension.

Those members of the over-65 group—particularly men—who actually do retire often benefit from medical counseling to prepare them for the transition from activity to the nonactivity that Dr. Grant calls "the deadly boredom of the perpetual holiday." For the physician can often help them plan appropriate activities to occupy time and thought, and to avoid "that most deadly disease of senescence—self-pity."

However, whether or not the elderly person retires, his medical care requires special approaches, for "it is important to realize that the symptomatology and pathology of the old is in a category of its own." Pain is less acutely felt. In conditions such as fracture, coronary disease, or appendicitis, where the onset of pain usually prods the younger patient into medical consultation, the less acutely felt pain may dangerously delay such consultation for the older patient or make diagnosis more difficult.

The main fear of most aged people is not of death but of a final period of helpless, dependent invalidism. "The successful doctors and nurses of the elderly are those who help the patient to die with his boots on." (*New Zealand M. J.*, 58:235, June, 1959.)

The Skin And Mucous Membrane Manifestation Of Monocytic Leukemia

THEODORE S. EVANS, M.D. AND ROBERT LOMBARDO, M.D.

New Haven

MONOCYTIC or monoblastic leukemia, first described in 1913 by Schilling von Torgau, has finally been recognized as a specific hematologic entity by nearly all hematologists, though one large and very important group still refer to it as "monocytoid myeloblastic leukemia" in keeping with Naegeli's concept. Rosenthal recognized that it is clinically different from the other leukemias but felt that cytologically it was merely a variant of myeloblastic leukemia. Thus the massive hyperredundancy of the gums is quite characteristic of this form of leukemia and is rarely seen in other forms. Likewise the early involvement of the liver with enlargement and the relatively late or absent splenomegaly and lymph adenopathy are so frequent as to be clinically significant. The course of the disease with bleeding early or at its inception is well known and the rapidity of its progress, usually unimpeded by any form of treatment, is a tragic fact in most cases.

Monocytic leukemia is a common form of leukemia in adults and fairly frequent in children. While its recognition has only recently become widespread and while undoubtedly this accounts for a large part of its apparent percentage increase, still it is true that even those of us who have been familiar with the disease for 25 years are seeing more cases and a higher percentage than previously. Thus in a review of all the cases of leukemia in the New Haven area 1925-1940, we arrived at the figure of 16 per cent for monocytic leukemia, and at the same time Doan in the Columbus area arrived at the figure of 18 per cent. Since 1940, the relative frequency of this form of leukemia in our area is more nearly 30 per cent of all the acute leukemias.

Although dermatologists, hematologists, and internists are thoroughly familiar with the multiplicity of skin lesions seen in leukemia and although there are in recent literature^{2, 5, 6, 8} adequate and painstaking descriptions of all types of skin lesions,

we are prompted to present this report concerning three cases of monoblastic leukemia because of the difficulty we met studying the literature. These patients entered the Hospital of St. Raphael within a period of twelve weeks. We reviewed 45 reports of skin lesions in leukemia. But we were able to find only a few references to the characteristic nodular skin lesions of monoblastic leukemia because there was nothing in the listed title of these reports to indicate which were specifically concerned with nodular skin lesions. The general reviews of the dermatological lesions of leukemia, for the most part, merely mentioned that nodular skin lesions are seen. We were unable to find photographs of these skin lesions. Bluefarb,¹ Gerhard³ and Herschel described nodular lesions of the skin seen in granulocytic leukemia. Hewitt⁴ and others described a case of nodular skin lesions in monocytic leukemia. The best description which we were able to find was that by Mitchell⁷ which described a case of monocytic leukemia with lesions that appeared to be almost identical to those in our own case. Unfortunately he did not have photographs appended.

CASE NO. 1

M. L., a 44-year-old white male entered the hospital with a history of ecchymoses, petechiae and nodular skin lesions. He also had marked weakness and had noted some abdominal pain and chest pain. A tentative diagnosis of pneumonia had been made at another hospital, but not confirmed by x-rays. The white blood counts there, were said to have ranged between 5,000 and 14,000. Differential counts were not furnished. Past and family history was not relevant. The patient was seen to be a well nourished, well developed male with spectacular nodular erythematous lesions of the skin, particularly in the skin of the lower extremities. Many of these lesions had a violaceous hue due to hemorrhages in the skin. Petechiae were widespread on the mucous membranes and skin. There was moderate enlargement of all of the peripheral lymph nodes. The liver was felt approximately four inches below the costal margin, and the spleen

From the Hematology Service, Hospital of St. Raphael, New Haven.
We wish to express our thanks to the Pathology Department, Hospital of St. Raphael, particularly to Dr. W. A. Herbordt, who described the skin pathology for us.



FIGURE 1.

The skin lesions of monocytic leukemia. Note the distribution which spares the area immediately surrounding the knees.

was felt to the level of about two inches. Photographs of the skin lesions of the lower extremities are appended and demonstrate the fact noted by Dr. Stuart Finch that these nodular lesions tend to occur in the areas of hair follicles. This gives a dramatic appearance to the lower extremities where the lesions spared the knee caps (Figure 1) and stopped abruptly at the ankles. A tentative diagnosis of monoblastic leukemia was made clinically and was confirmed by studying the peripheral blood and bone marrow.

On admission, the hemoglobin was 9.5 gms., hematocrit was 31 per cent, white blood count was 6,700, and the platelets were 10,000. The differential count showed 89 per cent monoblasts. On the tenth hospital day, the total white blood cells had risen gradually to 135,000. On the second hospital day, the bone marrow showed a similar picture to that of the peripheral blood. There was marked depression of maturation in the progenitors of the red cells and platelets. Blood was found



FIGURE 2.

Note the many lesions of the trunk.

in the stools and urine. The rest of the laboratory work was consistent with the diagnosis of monoblastic leukemia. Transfusions temporarily restored the hemoglobin and hematocrit levels to 12 gms. and 42 per cent respectively. Platelet counts were never higher than 10,000. Improvement was ephemeral, and the patient died suddenly in acute respiratory distress on the tenth hospital day.

Autopsy revealed massive cerebral hemorrhage and invasion of the brain, liver, spleen, kidneys, and lungs with monocytes and monoblasts. Photomicrographs of a skin biopsy are shown in the illustration appended and demonstrate invasion of the deep layers of the skin and sweat glands. The diagnosis was acute monoblastic leukemia, with typical nodular skin lesions.

CASE NO. 2

N. W., a 51 year old male entered the hospital with a history of longstanding weakness, cough, fever, and "anemia." He had been followed in the out-patient department for several weeks and had been treated there as monoblastic leukemia with steroids, 6 mercaptopurines (M.P.), and transfusions. His blood counts had been recorded as showing hemoglobins from 8.7 gms. to 12 gms., hematocrits from 30 per cent to 45 per cent, and white blood counts varied from 41,000 to 1,000. The platelets had never been over 20,000. Segmented neutrophils ranged between 20 per cent and 50 per cent and monoblasts from 15 per cent to 53 per cent.

On admission, the patient presented as a thin, wasted male with marked icterus, nodular skin lesions and healing ulcers of the lips. The lymph nodes were barely palpable. The liver was enlarged four inches below the costal margin, but only the splenic tip was palpable. There were marked hyperredundant ulcerative lesions of the gums. Some of these lesions were actually growing over the teeth. There were also ulcerative lesions of the mucous membrane. See Figure 3.

The nodular skin lesions were similar to those noted in case 1 and were particularly numerous on the trunk in the neighborhood of the hair follicles. Also like those in case 1, they had a violaceous hue.

On admission, the Hemoglobin was 7.1 gms., hematocrit was 24 per cent, the white blood count was 1,000, and the platelets were 12,000. Three days later, the hemoglobin was 6 gms., hematocrit was 26 per cent and the white blood count was 900. The differential counts varied between 53 per cent and 66 per cent monoblasts.



FIGURE 3.

Note the hyper-redundancy of the gums.

The bone marrow showed almost complete replacement of the normal cells with monoblasts and marked red blood cell and megakaryocytic depression.

The patient's jaundice increased. The blood uric acid was 14.2 mg. per cent. The direct bilirubin was 14.8 mg. per cent and the total was 23.2 mg. per cent. The patient's stools were positive for blood. In spite of transfusions, steroids, and 6 M.P., the patient deteriorated rapidly and died on the third hospital day.

Autopsy revealed skin lesions similar to those described in case 1. The brain, liver, spleen, kidneys, and lungs were all grossly infiltrated with

monoblasts. This was a case of monoblastic leukemia, with nodular skin lesions and the typical redundant ulcerative gum lesions which are almost diagnostic of the disease.

CASE NO. 3

M. C., a 38-year-old male entered the hospital because of painful swelling and bleeding from the gums, which followed a tooth extraction one week prior to admission. Three days before admission, he passed grossly bloody urine.

On admission, he was seen to be a well-developed, well-nourished white male with numerous nodular skin lesions, similar to those described in cases 1 and 2. Some of these had the same violaceous coloring and some were light brown. The spleen was not felt. The liver was palpable two inches below the right costal margin. Peripheral lymph nodes were not palpable. The patient had a high fever, very rapid pulse rate, and was obviously extremely ill. His hemoglobin, on admission, was 8.8 gms., with the hematocrit 28 per cent and the white blood count 9,600. Sixty-six per cent of the white blood cells were monoblasts. The platelets were markedly decreased. Examination of the bone marrow confirmed the diagnosis of monoblastic leukemia. There was marked invasion by monoblasts, together with marked depression of the red blood cells and megakaryocytes. Transfusions had no beneficial effect, and the patient died on the third hospital day. Death was sudden and thought to be due to massive cerebral hemorrhage. Autopsy was



FIGURE 4.

Monoblastic leukemia with dermal infiltration of mononuclear cells illustrating the spared zone beneath the epidermis and the cell grouping about the skin appendages.

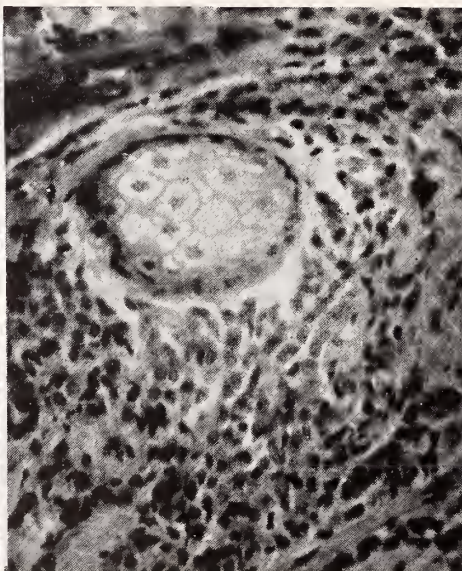


FIGURE 5.

Detailed view showing monoblastic cells with localization in the sweat glands deep in the dermis.

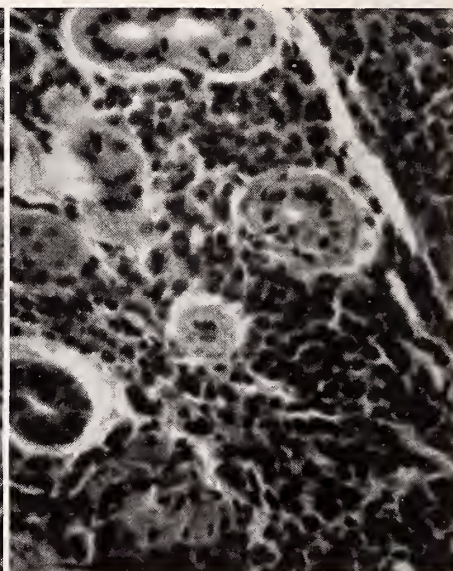


FIGURE 6.

Another detailed view of Figure 4 showing monoblastic cells grouped around a sebaceous gland.

refused. The final diagnosis was fulminating monocytic leukemia, with nodular skin lesions.

SUMMARY

Three cases of monocytic leukemia with characteristic gum and skin lesions have been described.

The literature has been reviewed.

Attention is called to the paucity of reports by title of such lesions in the literature 1950-1959.

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A "good" patient is one who has an interesting ailment capable of cure and at the same time continues to look pleasant, understands directions, asks very few questions and never complains. A "bad" patient begins by telling a poor story, full not of fact but of the alleged opinions of many physicians, is not easy of diagnosis and contrives to irritate and bewilder the attendants. Such a patient complains continually, asks questions innumerable and whether things go well or ill, never gives the attendants the satisfaction of seeing her made happy. There are of course degrees of "badness." Some patients are "terrible" while others are just difficult. The truth is that they are all "sick."

JOHN HOMANS

Maurice Strauss, Philatelist

WILLIAM J. BISHOP, F.L.A.*

London, England

MAURICE Strauss—like many other wise physicians—realised the value of hobbies, and for many years he sought relaxation in book collecting, in photography, and in travel. He was also a connoisseur of food and, what is more rare, an expert cook, as many of his friends can testify. When he was stricken by illness in 1952 these pursuits were denied to him, but he found a new and absorbing interest in the collection of medical stamps. The vast range of postage stamps of medical and scientific interest has attracted the attention of many physicians, but few have devoted themselves to this department of philately with such ardour and such success as Maurice Strauss.

Starting from scratch, and comparatively late in the day, he set about the colossal task of acquiring all the back issues of medical stamps and of keeping abreast of the ever-increasing flood of new material coming from practically every country in the world. Within an incredibly short time he had built up a collection which must rank with the most comprehensive ever formed in this specialized field. Furthermore, he had—with the help of his wife, Carolyn—classified and mounted his treasures in a series of magnificent albums. The whole collection was documented by historical and explanatory notes so that it formed an illustrated commentary on almost every aspect of medical history. Only those who have tried to annotate a collection and to get at “the story behind the stamp” can realise what is involved in the way of long and patient research in a field which has been almost entirely neglected by philatelic experts. Dr. Strauss spent endless hours in tracing biographical particulars of alleged “Doctors,” many of whom turned out to be mere Doctors of Law or Divinity! He had also experienced the joy of tracking down such unexpected “truants” from medicine as Schiller, Chekhov, Clemenceau, Zamenhof and many others, and of identifying hospitals, research institutions, instruments, medicinal plants, and representations of medical symbols.

Dr. Strauss was not one to keep a good thing to himself. As early as 1953 his stamps were exhibited

at the Yale Medical Library. This exhibit attracted enormous interest and it led to showings of the collection at the Cleveland Health Museum and at the Smithsonian Institution in Washington and elsewhere. It was a source of great pride to Dr. Strauss that his collection was awarded prizes by the Third National Medical Stamp Exhibit and by the Committee on Exhibits of the American Academy of Dermatology and Syphilology.

It is impossible to give an adequate description of such a comprehensive collection as Dr. Strauss's within the space of a short note such as this. His collection ranged over the whole medical philatelic portrait gallery—Hippocrates, Avicenna, Maimonides, Vesalius, Sylvius, Rabelais, van Helmont, Auenbrugger, Semmelweis, Billroth, Hyrtl, Rokitsky, Claude Bernard, Donders, Purkinje, Ramon y Cajal, Metchnikoff, Pavlov, and a host of others. A special place was naturally reserved for the stamps commemorating Dr. Strauss's own countrymen—Long, Reed, Gorgas, Findlay, Cutler, Hopkins, Harrison, Franklin, among others—and he looked forward eagerly to the appearance of further issues honouring American contributors to medicine. We may be sure that he took particular pride in the stamps illustrating the development of his own specialty: the portraits of Ferdinand von Hebra, founder of the histological school of dermatology (one of the nine worthies of the Vienna school depicted on Austrian stamps of 1937), Hansen, discoverer of the leprosy bacillus (Cuba 1948), Alfred Fournier, the great venereologist and Director of the Hôpital St. Louis (France 1946), and Paul Ehrlich, discoverer of “606” (Germany 1954). The stamps showing Becquerel, the Curies, Roentgen and Finsen (Denmark 1905, unofficial) would also have a special attraction for him.

The innumerable Red Cross stamps are well represented in the Strauss collection, and as one would expect from Dr. Strauss' long-standing connexion with the Laurel Heights State Tuberculosis Sanatorium he had the stamps showing Laennec, Koch, Calmette, Sir Robert Philip and other pioneers of phthisiology as well as many stamps bearing the Lorraine cross, the emblem of the International Union against Tuberculosis. Stamps illustrative of

* Fellow of the Librarian Association.

nursing, of medical institutions, instruments and appliances, the caduceus and other medical emblems, maternity and child welfare, medical botany, congresses and many other subjects of medical interest came into Dr. Strauss' net. To Maurice Strauss the acquisition of medical stamps was no mere collector's mania. His new-found hobby re-

flected his passionate interest in the historic past, in everything medical, and, above all, in people. He continued to add to his collection up to the end, and it now remains as a permanent memorial to him—a unique record illustrative of the history and achievements of the profession which he adorned.

DERMATOLOGY — LEPROSY

GERHARD HENRIK ARMAUER HANSEN (1841-1912)
A Norwegian who first saw and described the
acid-fast bacilli which cause leprosy in man.

Issued for International Congress of Leprosy—Cuba—1948



FATHER DAMIEN (1840-1889)

Missionary whose life was spent with lepers.
Memorial to Father Damien—Belgium semipostal—1946



ISSUED FOR FUNDS FOR THE PREVENTION OF LEPROSY
IN LITTLE CHILDREN

1952

Brazil

1953



Current Case Of Lepromatous Leprosy

Acid-fast Bacilli In Epidermis

ALFRED HOLLANDER, M.D.*

Springfield, Mass.

SHELDON C. SOMMERS, M.D.**

Boston, Mass.

IN 1952 we reported a case of lepromatous leprosy in a 13-year-old girl of Greek extraction who arrived in the United States in 1947 and had resided in Massachusetts for 5 years.¹

Our present observation concerns a person of Portuguese extraction who has resided in Massachusetts for 40 years. The purpose of our report is primarily to remind physicians that leprosy, although rare in our part of the United States, is a disease which one may encounter. The case we are describing represents a combination of diabetes mellitus and leprosy. Nodular skin lesions were diagnosed as xanthoma, and this diagnosis remained unchanged over a period of several years. Then his physician referred the patient for examination of two ulcerated lesions which had recently developed on the left hand.

HISTORY

The patient was born in 1889 in Limões, a small village of about 300 inhabitants in the province of Traes-Montes in the northern part of Portugal. He lived there until 1919 when he immigrated to the United States. He returned to Portugal three times in 1926, 1932, and 1949, each time remaining from two to four weeks. As a young man in Portugal he did farm work and was a musician. No cases of leprosy in his native village or among his family were known to him. His father died suddenly at the age of 70, possibly from a heart attack; his mother died at the age of 46 from an unknown cause. He had one brother who at an early age left for Brazil. The patient lived in New Bedford, Massachusetts, from 1919-1924, and since that time in a town in Western Massachusetts. He married in 1921 a woman of Portuguese extraction. There are two daughters living and well. Up to his retirement in 1954, he was a factory worker. With the exception of smallpox at the age of 12, he has never been seriously ill until 1942 when he was hospitalized because of stomach pain. In the course of the examination the diagnosis of diabetes mellitus was established. He has been under continuous med-

ical care for diabetes which has been controlled with diet and insulin. In 1947, he first noticed sensory changes of the legs. In 1950, red patches appeared on his trunk, and about one year later, skin nodules developed. In August 1953, his physician referred him to a dermatologist who felt it necessary that a biopsy be performed. Consequent examination in an outpatient clinic revealed nodular skin lesions involving all extremities and trunk. Excerpt of the hospital record reads as follows: "9-17-53: Several of the subcutaneous nodules of the back were biopsied and proved to be xanthoma." (The record did not give detailed histological

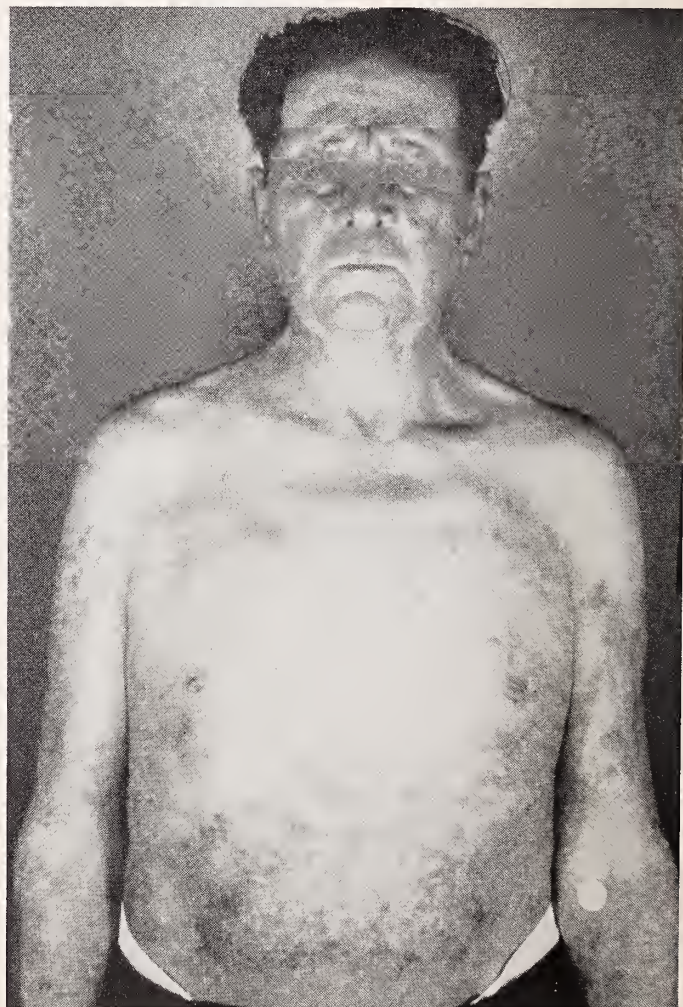


FIGURE 1
Facies leonina and front view.

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** Associate Professor of Pathology, Boston University School of Medicine, Boston; Pathologist, Massachusetts Memorial Hospitals, Boston.

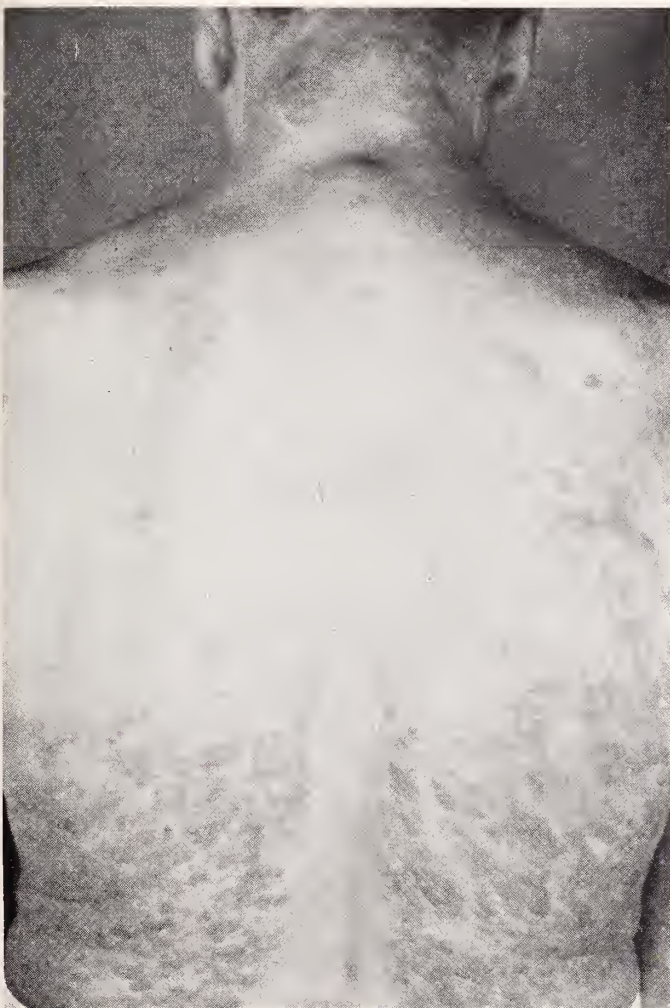


FIGURE 2
Back view.

description.) The patient was seen about 10 times between August 1953 and September 1955 at the same clinic. The records of those visits are not revealing except for a note of 3-10-53: "The patient's only complaint at present is that the sensation in his legs is not normal. On testing he is unable to distinguish sharp from dull over the legs."

At the end of 1958, the patient noticed a change in two lesions of the fourth finger of the left hand. On the next visit to his physician in February 1959 he was referred to one of us (A. H.); he came two and one-half months later, on April 28, 1959.

CLINICAL FINDINGS

Examination revealed a 70-year-old white, well-nourished male with gray, earth-colored skin. The appearance of the face was striking, a distinct facies leonina (Fig. 1). Almost the entire surface of the body except the scalp, upper chest, upper back, and the hollow over the lumbar spine were covered with well-defined round and oval yellow-brown, red-brown, and bluish-red, soft cutaneous nodules, mostly elevated above the skin level. They varied in size from 0.5 to 1 cm. in diameter. On the abdo-

men and the lower back the soft nodules showed yellow-brown color and were fused to larger plaques (Fig. 1 and 2). In some of these plaques individual nodules, about 0.5 cm. in diameter, could be distinguished. There was atrophic, cigarette-paper-like wrinkled skin of the forearms and the extensor aspect of the hands. Two indurated lesions, 1 cm. in diameter, with central ulceration were found on the extensor aspect of the fourth finger of the left hand (Fig. 3). The eyes showed the usual sequels of cataract operation. He had well-controlled glaucoma (open angle type). The nose and oral cavity showed no changes. The hair of the scalp was normal, but there was considerable loss of supraciliary, ciliary, and axillary hairs. Enlarged inguinal lymph glands could be palpated. Thickened, firm ulnar nerves were found on the upper arms above the olecranon. On the forearms, hands, legs, and feet he showed loss of sensation for touch, temperature, and pain. The blood Hinton reaction was negative. The blood picture was normal. His diabetes mellitus was well controlled with 30 units of protamine zinc insulin daily.

Skin biopsies were performed on April 30, 1959, on lesions of the glabella frontis of the face, the left side of the chest, the left upper arm, and the ulcerated lesion of the base of the fourth finger of the left hand.

HISTOLOGY

Histologically all four biopsied sites showed granulomatous inflammatory foci extending from just beneath the epidermis to the full depths of the specimens, at least to a depth of 4 mm. The predominant inflammatory cells were large foamy-appearing histiocytes, packed into large masses that contained a few intermingled lymphocytes. Lepa cells containing globules of faintly discernible organisms were present, and since the vacuoles were



FIGURE 3

Ulcerated lesions of fourth finger of right hand and atrophy of skin of both hands.

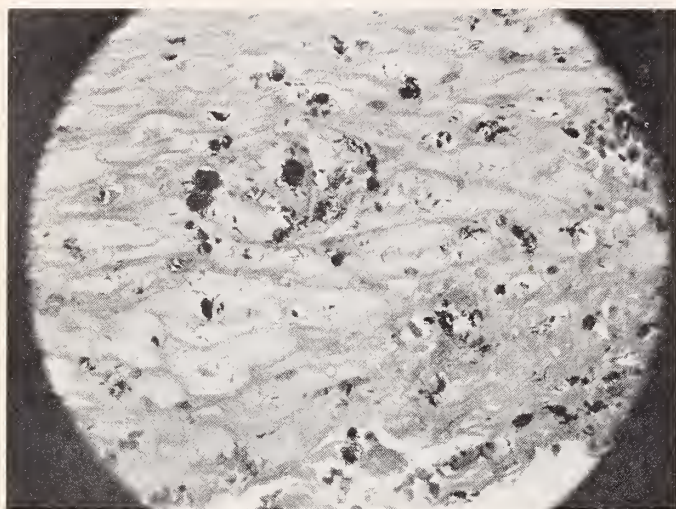


FIGURE 4

Acid-fast bacilli in epithelium of epidermis of ulcerated lesion of right hand; x 800.

quite irregular in size and shape, simulation of xanthoma cells was only superficial. In the depths of the dermis the granulomas tended to surround nerves and larger vessels.

The ulcerated lesion of the hand showed hemorrhage, necrosis, nonspecific epithelial hyperplasia, and acute inflammation. It did not appear precancerous.

Acid-fast stain of all four biopsies showed tremendous numbers of bacilli, some collected into globi, typical of lepra bacilli. In the ulcerated lesion, numerous acid-fast bacilli were actually growing in the epithelium of the epidermis² (Fig. 4). Rare acid-fast bacilli were seen in the epidermis of the other biopsies, including one with acanthosis, but there were so few bacilli that artefacts could not be excluded.³

Re-examination of the biopsy specimen, diagnosed in 1953 as xanthoma, showed typical lepromatous leprosy; acid-fast stain revealed numerous bacilli in the corium.

DISCUSSION

It seems obvious that the clinical diagnosis of xanthoma was reached because nodular skin lesions of yellow-brown and red-brown color developed in a diabetic patient. On histological examination the nodules were interpreted as xanthoma, and for this reason the diagnosis was never doubted or challenged, although a team of physicians observed the patient over a period of several years. No detailed examination and no classification concerning the diagnosed lipidosis were made. Sensory disturbances of the legs of which the patient complained on one of his hospital visits did not arouse any suspicion, and the examiner most probably felt that he was dealing with diabetic neuropathy.

We are aware that the experienced dermatologist

is usually able to differentiate and diagnose the various clinical manifestations of the skin, representing different diseases. The physician not familiar with the multitudinous skin diseases, their varied manifestations and possible causes will easily miss the proper diagnosis.

We feel, therefore, that textbooks on dermatology and internal medicine should include in their respective chapters on xanthomatoses, sarcoidosis, and benign cutaneous tumors, the differential diagnosis of skin lesions of leprosy. Skin lesions in which the diagnosis is doubtful should be examined by a qualified dermatologist, and histologic examination should be made by a pathologist who is proficient in the interpretation of disorders of the skin. If the average physician is cognizant of the fact that leprosy is not a tropical disease, but may be encountered in any part of the world, he will remember that the diagnosis of leprosy should be particularly considered in unusual manifestations of the skin. In order to establish the diagnosis, he will then search for lepra bacilli in skin lesions. Simple methods are the "scraped-incision" variety of the so-called "slit method,"^{4,5} or the "tissue-juice method."¹ A smear is fixed by heat and stained by the Ziehl-Nielsen method for demonstration of the acid-fast *Mycobacterium leprae*. Furthermore, a skin biopsy should be performed for histological study of the lepromatous lesion.

We wish to emphasize the characteristic findings of a free zone just beneath the epidermis, the so-called "Grenzstreifen," and of large vacuolated histiocytes, the so-called lepra cells, in the corium. These cells usually contain lepra bacilli.

No real facts are known so far about the source of infection and the incubation period of leprosy. Our patient resided during the first 30 years of his life in Portugal. This country is known to have cases of leprosy. Although he returned three times to his native country for several weeks at a time, between 1926 and 1949, it is most likely that the original infection occurred in Portugal during the first 30 years of his life. Nothing can be said about the length of incubation since we cannot determine the time when the first symptoms of leprosy appeared. Early symptoms, surely unrecognized by the patient, may have been in existence for a number of years before 1950, when he first noticed macular lesions.

Out of 36 reported cases of leprosy⁶ there were 26 admissions from the state of Massachusetts to the National Leprosarium in Carville, Louisiana, between 1916 and the present date. Two of these patients were born in Massachusetts; one was a white male, who lived in Massachusetts all of his life, as far as is known. Onset of leprosy occurred at age 16. His parents were born in Portugal, and

his father had leprosy. There is no doubt that the father was the source of infection. The other patient was a white male, who spent a total of 20 years in Burma as a missionary.⁷

Leprosy is a reportable disease, but there is no law in Massachusetts requiring isolation of a case of "open" lepromatous type of leprosy. Probably persons with lepromatous leprosy constitute the principal source of infection. For this reason we feel that the legislature of the Commonwealth of Massachusetts and those of other states which have similar lack of legislation should pass a law, transferring every person with an open case of leprosy, regardless of age, to the National Leprosarium (U. S. Public Health Service Hospital in Carville, Louisiana). Such a person should be treated at the expense of his state if necessary and kept in the leprosarium until the infectious stage has ceased.

SUMMARY

We observed a case of lepromatous leprosy in a 70-year-old white male of Portuguese extraction who lived in Massachusetts for 40 years. The patient also had diabetes mellitus. It is emphasized that leprosy should be considered in the diagnosis

of unusual skin lesions which may be diagnosed as xanthoma, sarcoid, or benign cutaneous tumors.

Numerous acid-fast bacilli were found in the epithelium of the epidermis in an ulcerated lesion of the hand.

The legislature of those states in the Union where legislation regarding isolation of open cases of leprosy does not yet exist are urged to enact a law for the transferral of such cases to the National Leprosarium in Carville, Louisiana.

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130 Maple Street, Springfield (5), Mass. (Dr. Hollander).

Acute Rheumatic Fever In Adults

Consideration of rheumatic fever as a disease of childhood overlooks the very important fact that adults are also susceptible," says Dr. Addison B. Scoville.

Several factors contribute to making diagnosis of rheumatic fever in adults more difficult than in children. Confusion may arise because of similarities to other polyarthritides. Adults may less frequently exhibit such significant manifestations as chorea, erythema marginatum, and carditis than do children. Presence of heart murmurs and various nonspecific findings may reflect "complications of rheumatic heart disease rather than recrudescence of activity." "Finally, since acute rheumatic fever is usually considered a childhood disease, the physician often neglects to consider it seriously in the differential diagnosis in the older age group."

Adults have manifested hyperpyrexia and polyarthritis and have shown a higher incidence of arthritis than carditis. "In the absence of carditis, migratory polyarthritis, absence of chronic joint changes and an association with recent streptococcal infection, should suggest acute rheumatic fever as an excellent diagnostic possibility."

Drs. Elmer Pader and Samuel K. Elster "found determination of the C-reactive protein to be the most valuable guide to the treatment and management of acute rheumatic fever." Also, "the antistreptolysin-O titer has great usefulness in the differentiation of rheumatic fever from other arthritides by demonstrating the presence of an antecedent streptococcal infection."

Effective therapy demands a correct diagnosis of arthralgia, which must be considered as a possibility by the physician in order to help the adult patient—and benefit medicine. (*J. Tennessee M. A.* 52:260, June, 1959.)

Radiation Therapy Of Acne

JOHN S. STRAUSS, M.D.
Boston, Massachusetts

TWENTY to thirty years ago most dermatologists felt that x-ray therapy was an essential part of the therapeutic regimen for the treatment of acne. However, at present, with the increasing skepticism surrounding the use of x-rays for benign conditions, the opinions concerning x-ray therapy in acne are widely divergent. While some physicians claim remissions of many years duration, others feel that this modality is of no value. My purpose herein is to consider to what extent x-rays are helpful in acne.

Before discussing the specific effects of x-rays, one might ask, what is acne?¹ Acne is a disease involving a peculiar type of follicle, the sebaceous follicle. This follicle is characterized by enormous, multilobular sebaceous glands and a rudimentary hair. This follicle is the site of comedo formation. A comedo does not represent simply sebum retention. It is a dilated follicle choked with horny scales and numerous *Propionibacterium bacilli*. Basically there are two types of comedones. The "open" comedo (clinical blackhead) has a patulous opening and is an inactive lesion. It is ugly but not very harmful. The "closed" comedo which clinically appears as a tiny white kernel is characterized by a microscopic opening through which little material can escape. This is the time bomb of acne, and rupture of closed comedones, liberating keratin, lipids, and bacteria leads to inflammatory lesions, pustules, papules and nodules. While there are several ways in which pustules form, the most important is the escape of sebum through the follicular wall. Sebum is an irritant and excites an inflammatory response.^{1,2} Any therapy which produces prolonged depression of these large sebaceous glands will result in clearing of the acne.¹

Superficial x-ray therapy was administered to one cheek of volunteers who had acne. Appropriate biopsy specimens, which were serially sectioned, were obtained before therapy and at various intervals after treatment, from both sides of the face. The control biopsy specimens were taken from the identical area of the opposite cheek. Our experience with controls of this nature have verified that they supply adequate information to estimate sebaceous gland size within a ten to twenty per cent limit of error by direct histologic study of *serial*

sections. The details will be published elsewhere.³ With single dose therapy of 300r, a slight reduction in size was seen; with 400r and 800r more prominent sebaceous gland depression was evoked. However, this effect, which was maximal at two weeks, was short lived. The glands were once again normal in size within a period of four to six weeks. When fractional therapy of 75r or 150r per week is given, a moderate suppression of the sebaceous glands is seen after a total of 450r is given. This suppression increases gradually and when 800r is exceeded the sebaceous glands are almost completely wiped out. (Figure 1). Nevertheless, once

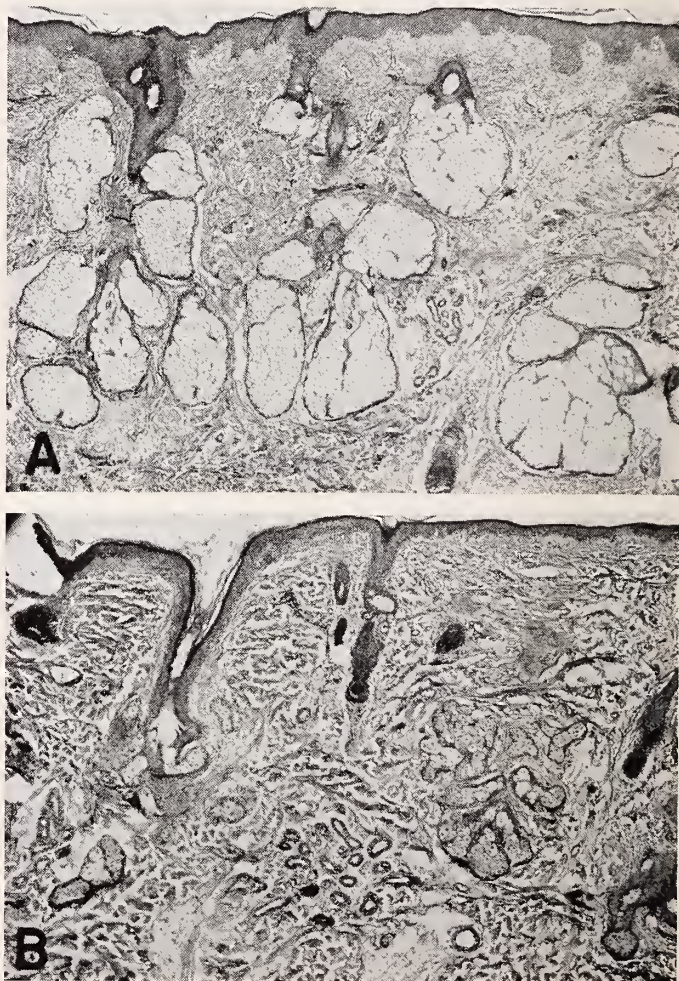


FIGURE 1

(Both X₄₀). Cheek, same patient. A. Control showing large sebaceous follicles. B. 75r per week for eleven weeks (825r), biopsy three weeks after completion of therapy. The individual cell size and the number of lobules remains unchanged. However, each lobule consists of only a few cells. Considerable sebaceous gland depression is still evident.

From the Department of Dermatology (Herbert Mescon, M.D., Professor), Boston University School of Medicine, and the Evans Memorial of Massachusetts Memorial Hospitals, Boston 18, Mass. This work was supported by Grant E-1936 from the National Institutes of Health, United States Public Health Service.

again recovery is relatively rapid (Figure 2). With 600r restoration is complete in one month; with dosages as high as 1200r, the glands appear normal within a four month period.

X-ray therapy is commonly held to be anti-inflammatory. This is certainly not true for acne. In histological sections the inflammation is charac-

teristically increased. If x-ray is not anti-inflammatory, and cannot heal the lesions that are already present, how does it work? Its action is basically prophylactic; it prevents new lesions. As long as the glands are suppressed, no new inflammatory lesions will form.

The histologic and clinical effects correlated neatly in this institutionalized group of subjects. Single dose therapy, which as stated above produced only a short period of suppression, was of no value clinically. With fractional therapy, there was a definite lag period during which the eruption was often aggravated. By the seventh to eighth week when 525r-600r had been given definite improvement was noted, and shortly thereafter the disease went into complete remission on the treated side. The untreated side while sometimes improving, never showed the marked clearing seen after x-ray.

While some clinicians claim prolonged remission, lasting for years after x-ray, this has not been the experience in this group. Two to three months after the completion of therapy, at a time when the sebaceous glands had regenerated, relapses occurred. Permanent suppression of the sebaceous glands cannot be obtained, for even when 1500r of conventional superficial x-ray is given at a single exposure, an amount of radiation invariably producing permanent atrophy and telangiectasia, some sebaceous regeneration is seen.

Utilizing this data, it is obvious that the object of radiation therapy is to produce protracted suppression of the sebaceous glands. This can be accomplished safely with fractional therapy. If 75r is given per week, a course of 10 to 12 weeks can be given without exceeding the commonly accepted safety standards. This will produce glandular suppression, and thereby clinical remission, which will last for two to three months after completion of therapy. Further lengthening of the effect might be obtained by giving therapy only every second week, but no experimental data is available to support this point.

In closing, I wish to state my viewpoint on x-ray therapy. There is no doubt that excellent clinical remission can be obtained. However, of prime importance is the inescapable fact that the effect is temporary; relapses are to be expected. Special circumstances may dictate its use, but it is erroneous to rely on x-ray as the only method of treating this disease. Expressing this in one short phrase, it can be stated, "x-ray therapy is useful but temporary."

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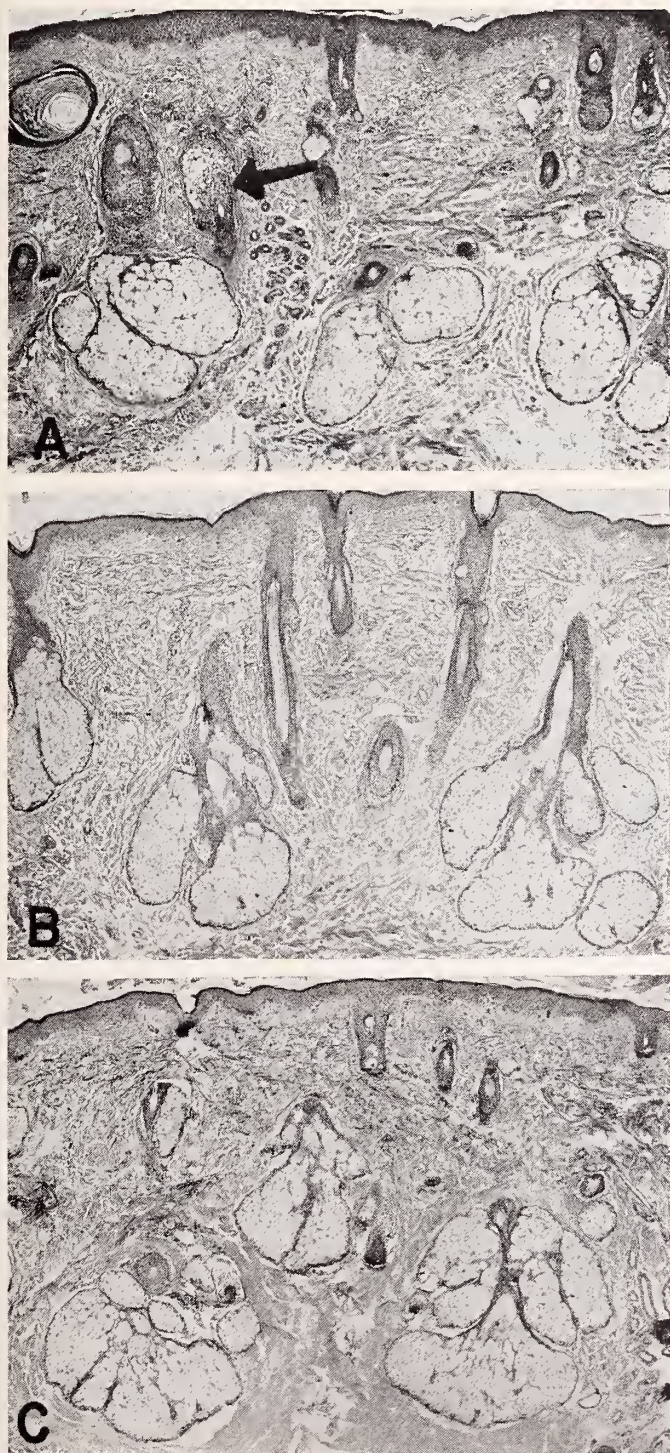
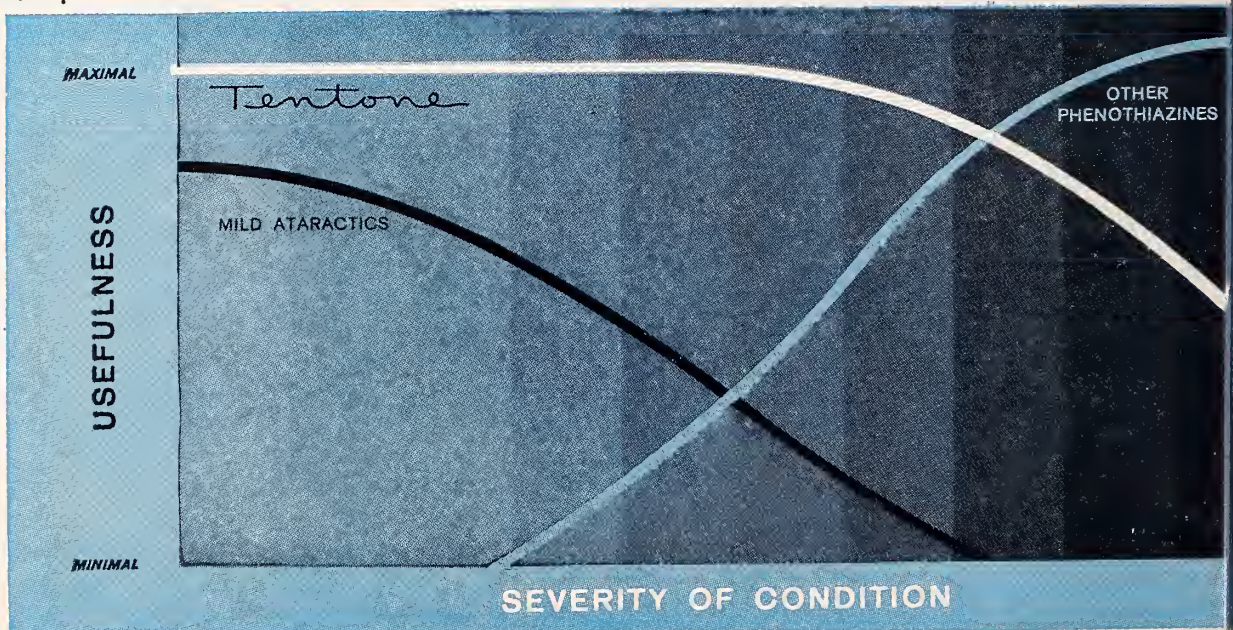


FIGURE 2

(All X40). Check, same patient. A. Control with large sebaceous follicles and a portion of an inflammatory lesion (arrow). B. 75r per week for eleven weeks (825r), biopsy five weeks after completion of therapy. The sebaceous glands are already normal in size, as they also are in C. taken twelve weeks after the completion of therapy.

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The Strauss-Bunting Verruca

ROY N. BARNETT, M.D. AND HENRY CORWIN, M.D.
Norwalk, Conn.

ONE of Maurice Strauss' major contributions to medicine was his establishment that there was a specific group of verrucae, recognizable on clinical and pathological grounds, in which virus particles could be seen.^{1,2,3,4,5} Together with his constant collaborator, the pathologist Henry Bunting, and with the frequent help of virologist Joseph Melnick, he succeeded in making an intimate histochemical definition of the particles, in demonstrating them within diseased cells by electron microscopy⁶ and in crystallizing the virus as the first crystalline substance isolated from a human growth.²

We choose this occasion to elaborate somewhat on these findings partly because verrucae, particularly plantar, are becoming increasingly a medical and public health problem and partly to clarify the place of the Strauss-Bunting verruca in the general classification of warts.

Examples of the large and increasing incidence of plantar warts are reported by authors in various parts of the world. For example Rasmussen⁷ at the Jensen Institute in Copenhagen, noted a rise from 33 per 1,000 clinic admissions in 1927-8 to 425 per 1,000 in 1948-50, with 5,223 new cases in the year October 1, 1951 to September 30, 1952. Peterkin⁸ at the Royal Infirmary in Edinburgh found an increase from eight per cent of new admissions in 1934 to 33.7 per cent in 1957. The problem is particularly serious in the school age group. For example 6.8 per cent of 620 children in one Jackson, Michigan Jr. High School were found to have plantar warts.⁹ Rasmussen⁷ felt that these viruses were contagious enough to warrant the exclusion of children with plantar warts from school showers and locker rooms.

The current classification of warts is based on descriptive terms referring to shape, location and frequency. For example the classification based on shape includes sessile, filiform, digitate, mosaic, flat and acuminate. Another classification is based on location, i.e. palmar, plantar, subungual, periungual and anogenital. An additional grouping involves the term vulgaris and is somewhat confusing. Classically verruca vulgaris is the sessile

grey topped, keratotic wart, usually multiple, found most often on the hands of young people. The term has also been used, however, to refer to several of the shapes, many of the locations and several special subgroups of warts by various authors. This classification, helpful as it may be, does not make a place for the Strauss-Bunting verruca with its specific clinical, pathological and virus characteristics.

The term papilloma, frequently used by Strauss et al, is a pathological term used to describe many growths of mucous membrane and skin, and would seem too broad to describe a specific group of warts. Although the virus particles (thought to be altered keratohyaline by many^{10,11}) are often described in verruca vulgaris, it is not clear whether their presence is considered essential to this diagnosis. Strauss and Bunting³ divide verrucae vulgaris and plantaris into those with and without virus particles, the plantar warts having a much higher incidence of virus. Ormsby,¹² Allen¹³ and Lund¹¹ consider the presence of the eosinophilic bodies as characteristic of verruca vulgaris despite the fact that many clinically similar lesions have no such inclusions. Sutton¹⁴ separates out "Papillomas with pearly bases," which are those with viral inclusions, from verruca vulgaris. Finally, in a study done almost at the same time as that of the Strauss group, Lyell and Miles¹⁵ in Britain independently recognized the existence of a specific verruca containing visible virus inclusions and differing clinically from the usual warts. One of the important clinical differences was that these tumors responded well to curettage, a finding also noted by Strauss et al. They proposed the name "myrmecia" for the virus group and "verruca vulgaris" for the banal variety. The use of the term "verruca vulgaris" in this particular sense and the introduction of a new term added considerable confusion. They believe that two separate viruses are implicated as indicated by their transmission experiments in which one "myrmecia" in six attempts was transmitted as a "myrmecia" and three "verrucae vulgaris" in six attempts were transmitted as such. On the other hand they concede that two cases of "myrmecia" after removal recurred as "verrucae vulgaris." They also discuss the "transition" cases in which inclusion bodies are present in only small areas of the lesion. They

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TABLE 1

	STRAUSS-BUNTING VERRUCA "MYRMECIA" (LYELL & MILES)	OTHER VERRUCAE	MOLLUSCUM CONTAGIOSUM
Location	Mostly palmar and plantar 80% (Strauss)	Predominantly hands, knees, feet and face.	Usually trunk and anogenital area; almost anywhere except palms and soles.
Number	Usually less than 5	Often more than 5.	Multiple; sometimes over 50.
Duration	95% less than 6 mos. (Strauss) 90% less than 1 yr. (Lyell)	70% more than 1 yr. (Lyell)	Usually several months.
Symptoms	Painful particularly on pressure points	Usually none.	None.
Appearance	<i>Plantar & palmar</i> —grayish blue color; absence of hyperkeratosis and callus formation. <i>Other locations</i> —smooth, sharp sides, a plateau-like verrucous top and an erythematous halo.	Typical warty tumor, hyperkeratotic, often polycyclic borders. Erythematous only with secondary infection.	Discrete bulbous pearly papule with dimpled summit. Single large lesions may resemble epitheliomata. Erythematous only with secondary infection.
Response to curettage	About 75% cured.	About 35% cured.	Excellent, recurrence rare.
Inclusions	Oval nuclear and irregular cytoplasmic eosinophilic inclusions.	None.	Uniform large eosinophilic intranuclear inclusions.
Appearance of virus by electron microscopy	Characteristic crystalline clusters averaging 52 millimicra in diameter.	No uniform particles.	Brick shaped elementary bodies 220 x 300 millimicra.

found three such transition forms in their series of 101 patients which also included 36 "myrmecia" and 62 "verrucae vulgaris." Their feeling that there exist two separate viruses is not widely accepted.¹⁰

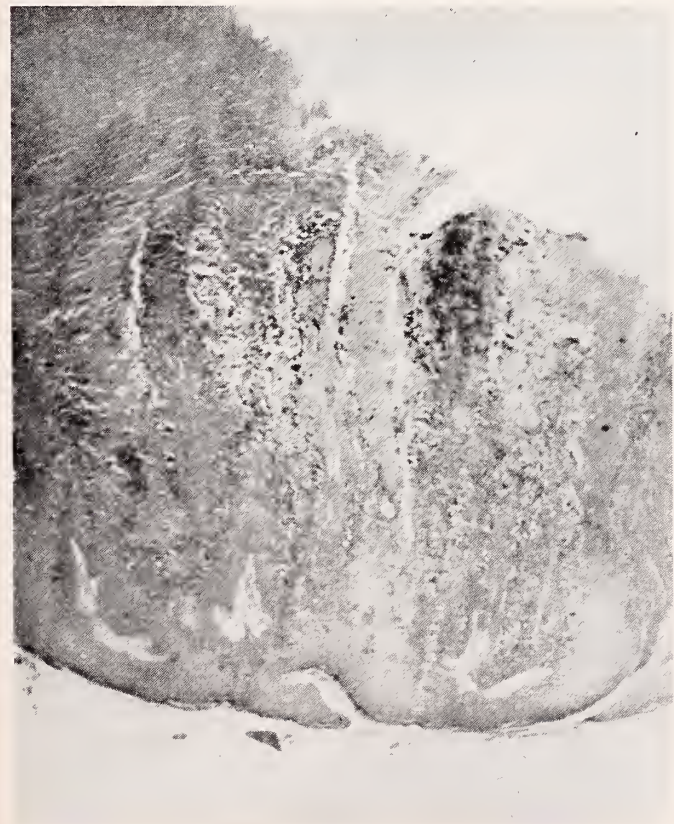


FIGURE 1
Strauss-Bunting verruca from right foot of 2 year old boy;
X 18.

Although the Strauss group does not specifically discuss the transition forms they do mention⁵ that histologic changes may be very localized; they rely on this to explain why three of 29 warts extracted yielded virus particles from the portion extracted but contained no typical inclusions in the other half used for microscopic section.

It is apparent from this discussion that separation of groups of verrucae should, if possible, rest on sounder ground than location and degree of surface protrusion. We believe with Lyell and Miles that a specific group recognizable clinically and pathologically does exist, should bear a specific name and does correspond to the "verruca with virus particles" of Strauss et al. When this appearance was present, Strauss and Bunting could always isolate virus particles. In this article we use the term Strauss-Bunting verruca for this group.

In text-table 1 are compared the usual features of the Strauss-Bunting verruca, other verrucae and molluscum contagiosum. The latter is included because of occasional histologic confusion produced by the striking inclusion bodies.

HISTOPATHOLOGY

The differential histopathology of the verrucae and molluscum is illustrated in the microphotographs. Fig. 1 is the lowest magnification of the Strauss-Bunting lesion. Inferiorly is the compressed, depressed lower layer of the epithelium, representing the bottom of a cup-shaped depression. Superiorly is the disorganized tissue of the verruca itself, representing the contents of the cup. Fig. 2 is taken through the base and edge of the

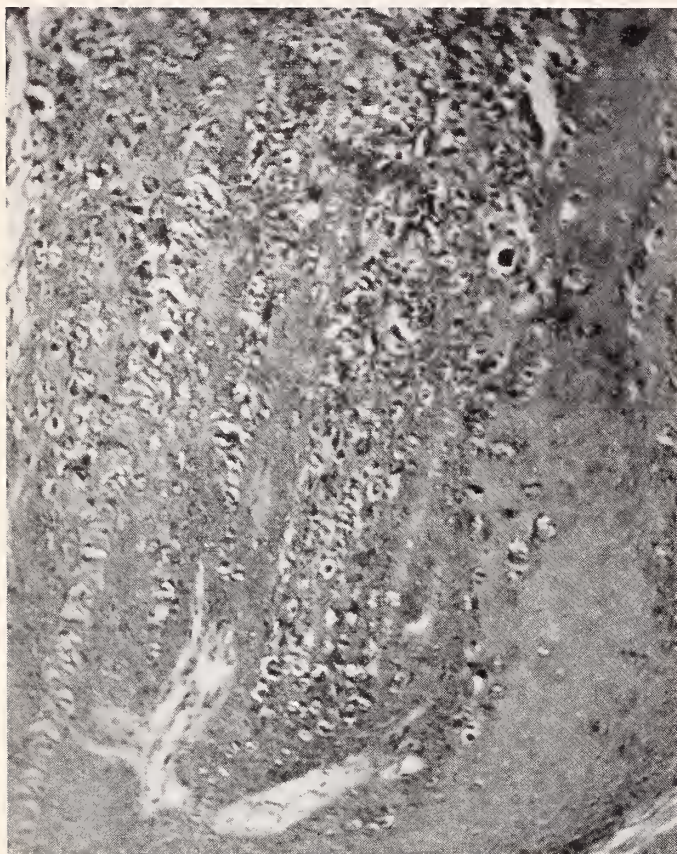


FIGURE 2

Strauss-Bunting verruca from right index finger of 21 year old woman; X 60.

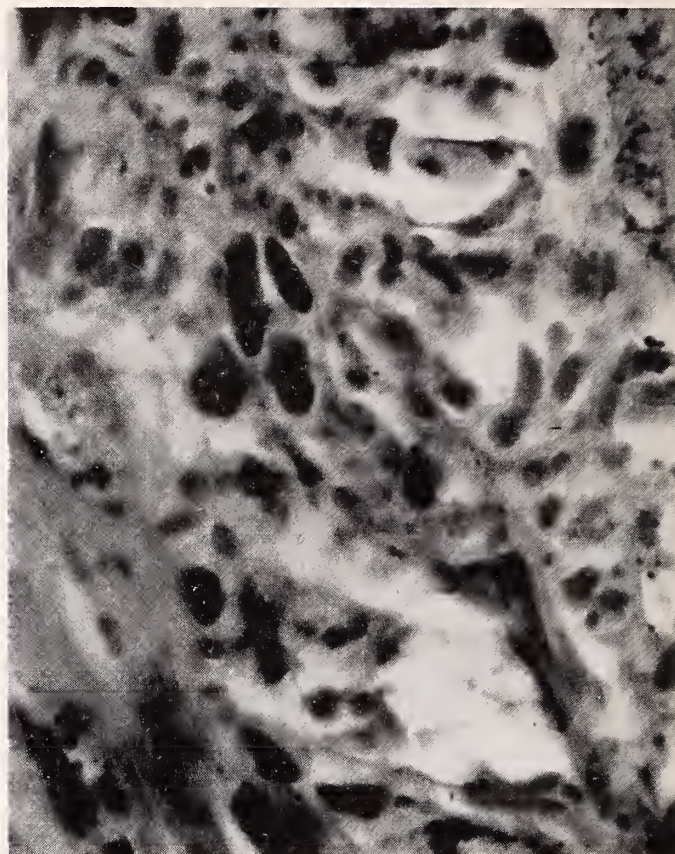


FIGURE 4

Same case as Fig. 2; X 570.

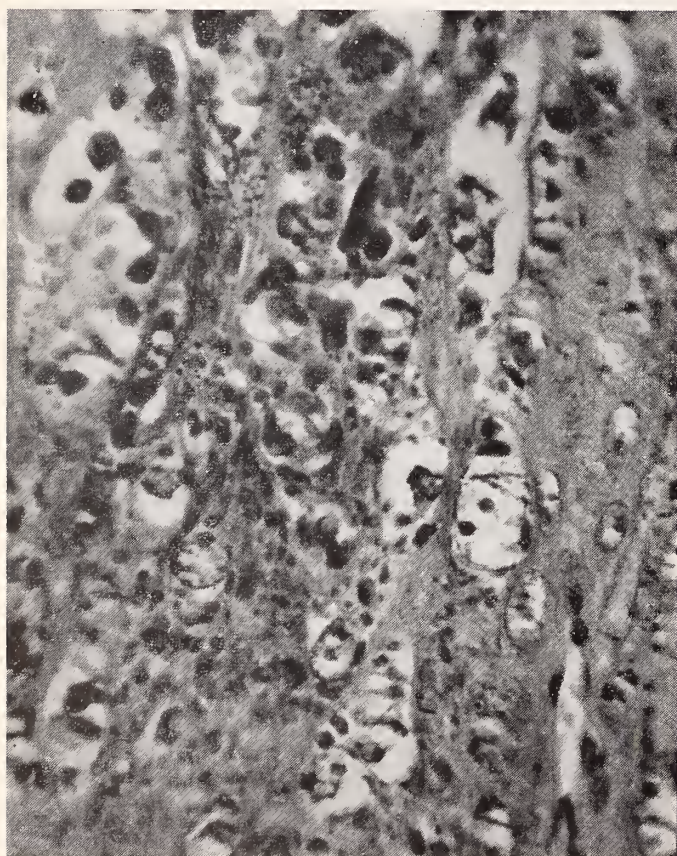


FIGURE 3

Same case as Fig. 2; X 240.

cup below, with the contents above and to the left. The inclusion bodies, black in the picture but actually both red and purple in H & E stains, are easily seen. At the high power magnification, Fig. 3, inclusions are striking; the nuclear inclusions are few, round, and eosinophilic; the cytoplasmic inclusions vary widely in size and shape, and vary from red to purple in color. The ovoid appear-



FIGURE 5

Transitional Strauss-Bunting verruca from right hand of 48 year old woman; X 18.

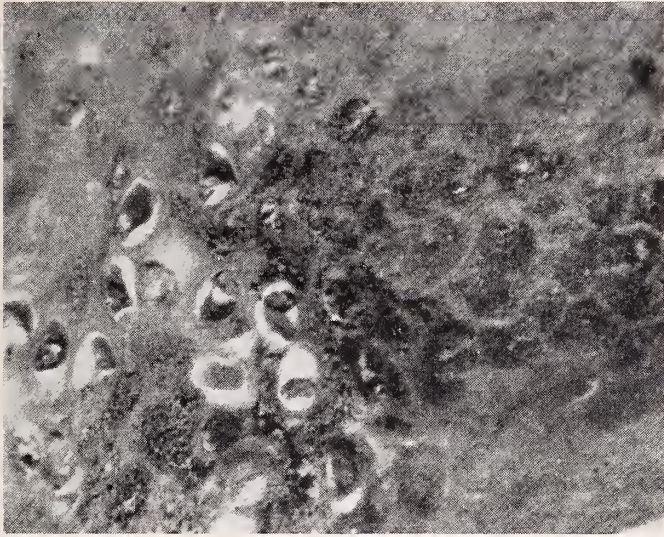


FIGURE 6
Same case as Fig. 5; X 60.

ance of the cytoplasmic inclusions is well seen in Fig. 4.

A transitional type of verruca is demonstrated in Figs. 5 through 7. Fig. 5 shows the projecting papillae of degenerated epithelium above, the recognizable more basal layers below. In Fig. 6 are seen the relatively few inclusions on the left, mostly nuclear in location and pink in color. On the right are many blue staining kerato-hyaline granules as seen in ordinary warts. In Fig. 7 can be seen the large inclusions of variable shape, both nuclear and cytoplasmic.

Only a single lower power view of the more usual verruca without virus bodies is illustrated (Fig. 8). The orderly proliferation of squamous epithelium which protrudes above the surface in small fronds is well demonstrated. At higher magnifications no virus particles are found.

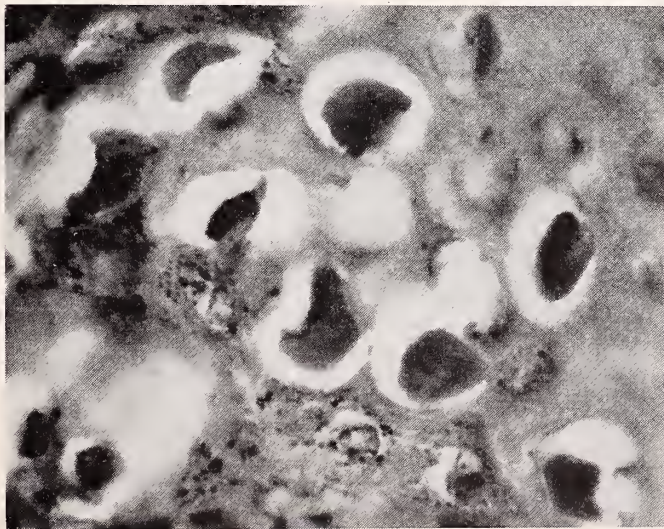


FIGURE 7
Same case as Fig. 5; X 240.

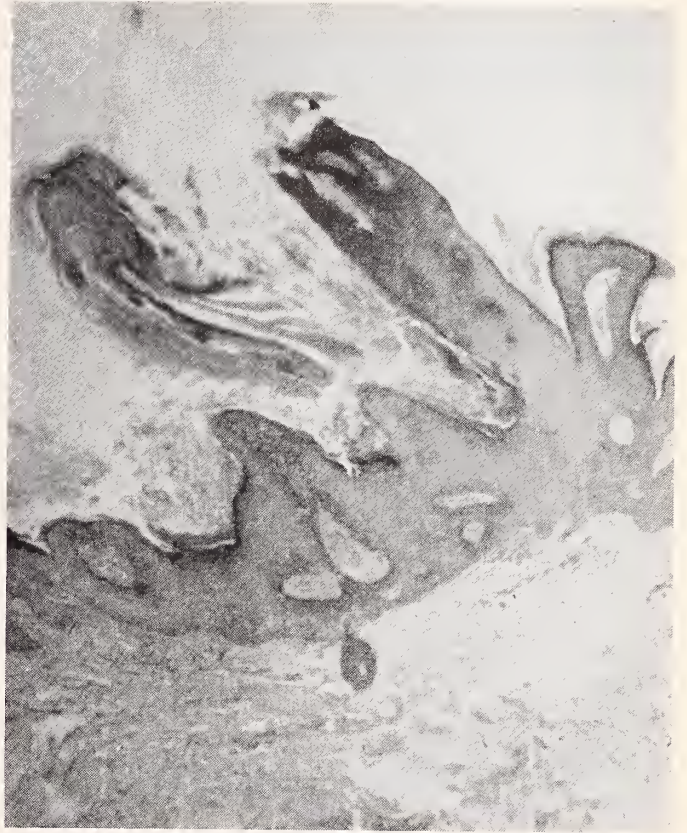


FIGURE 8
Verruca from 74 year old woman, location not known; X 18.

For completeness we include photographs of molluscum contagiosum, another virus lesion of skin in which the particles are readily seen. In Fig. 9 the cystic nature of the lesions and their location beneath the normal epithelium (at the upper left) is evident. In Fig. 10 the uniform, ovoid, intranuclear eosinophilic inclusions, located in the center of the lesion are prominently portrayed, and they

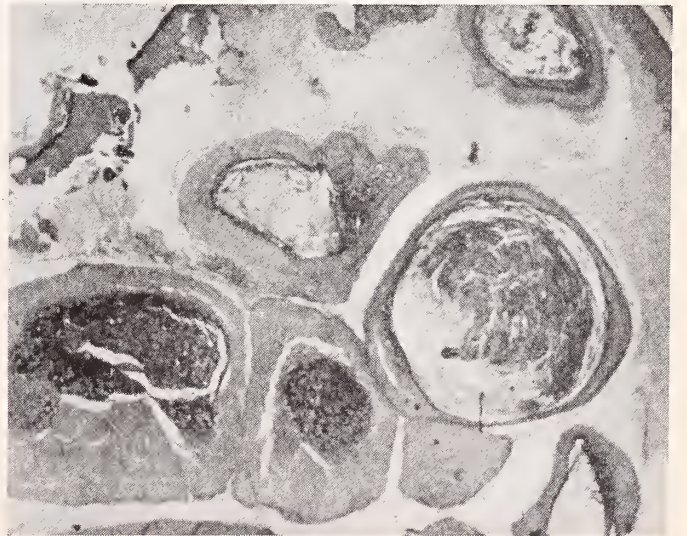


FIGURE 9
Molluscum contagiosum from right leg of 11 year old boy; X 18.

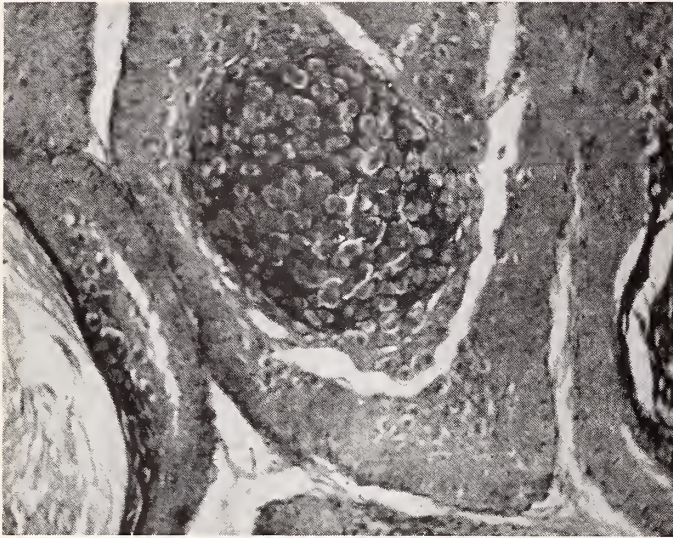


FIGURE 10
Same case as Fig. 9; X 60.

are still more obvious in Fig. 11. Much more detailed descriptions are given by Bunting⁵ and Lyell and Miles.¹⁵

MATERIAL AND METHODS

We selected from the Norwalk Hospital Surgical Pathology Index all skin cases classified as verruca, virus papilloma, epithelial papilloma, molluscum contagiosum, or other synonyms for the five years January 1, 1954 through December 31, 1958. The slides were reviewed and reclassified into the following categories according to the criteria already discussed and illustrated.

1. Strauss-Bunting verruca. Some of these were subclassified as transition forms, containing only few inclusions.
2. Other verrucae.
3. Molluscum contagiosum.
4. All other growths of epithelium or connective tissue.

Groups three and four were discarded. Questionnaires were then sent to the physicians submitting specimens in categories one and two, and an effort made to find the age, sex, location and duration of each lesion.

RESULTS

Cases: There were 104 cases; 13 Strauss-Bunting verrucae, of which two were transition forms, and 91 other verruca.

Distribution: Of the Strauss-Bunting verrucae four were on the feet or toes; seven were on the hands or fingers; two were on the knees. Of the other verrucae five were on the feet or toes; two on the hands or fingers; one on the knees; 16 on the arms and legs; 11 on the chest, abdomen or perineum; 44 on the neck, face or scalp; 12 of unknown location.

Duration: Of the seven patients with Strauss-Bunting verrucae in whom the duration was recorded, none was over four months. In the other verruca group the duration varied widely, but it is notable that many had been present for several years.

DISCUSSION

Even with the incentive which Blue Cross provides for routine histologic diagnosis it is certain that only a small proportion of skin lesions removed in this area reached the hospital laboratory, particularly when the lesions were patently benign. Furthermore the chances of obtaining Strauss-Bunting verrucae should be smaller in this type of study than in series where such lesions are specifically sought.^{3,15} It is somewhat surprising that our incidence is exactly the same as that of Strauss,³ i.e. 13 per cent showing inclusion bodies.

Our studies also confirm the short duration typical of the viral lesions. The preferred location is certainly on hands, feet and knees. In fact in our group the chances of a verruca being of the Strauss-Bunting type were 44 per cent on the feet, 77 per cent on the hands and 66 per cent on the knees. No lesion elsewhere in the body fell in the viral inclusion category. The finding of two transition forms in which only a few areas demonstrated virus bodies raises the question of the ultimate fate of older lesions. Do they become ordinary verrucae? Although this is certainly possible, in fact likely, we do not have sufficient data to answer the question at this time.

We do not believe that the proposed category of Strauss-Bunting verruca is overburdening the literature with an unnecessary term. We feel that clinical and pathologic recognition of this tumor will enable the physician to avoid the more in-

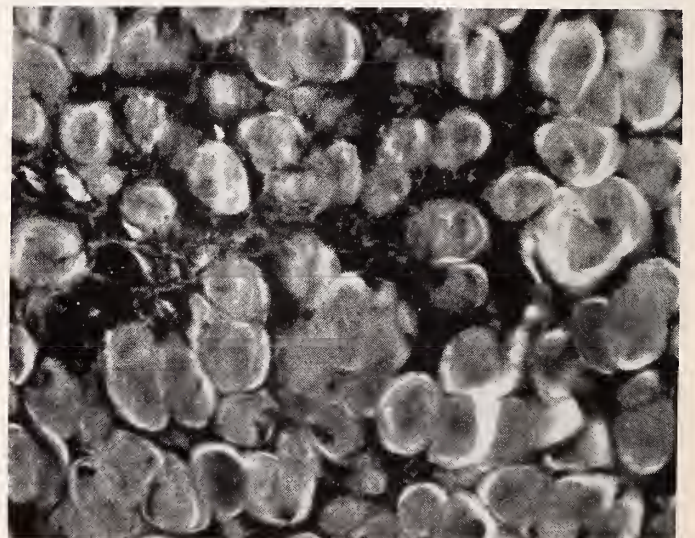


FIGURE 11
Same case as Fig. 9; X 240.

volved forms of treatment and to first use a simpler modality, namely curettage.

CONCLUSIONS

1. The term Strauss-Bunting verruca is proposed for a specific form of verruca with a characteristic clinical and microscopic appearance. The clinical and pathologic diagnostic features are discussed. Because of their reported good response to curettage, accurate recognition of these verrucae is useful.
2. In a consecutive five year series of verrucae examined in the Norwalk Hospital Laboratory 13 of 104 lesions were of this type. All were on the hands, feet or knees.

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LENGTH OF ARTICLES: Ordinary articles should not exceed 3,000 words (approximately 3 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

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A New Adventure

"Let us now praise our famous men
They are to be honored in their generation and are a glory in their day
And the congregation telleth out their praise."—Ecclesiasticus 44.

Since time immemorial people have found it fitting and good to praise their famous men. We are following an old tradition of journalism by devoting this issue to honor one of our illustrious colleagues. The issue is noteworthy for several reasons. First of all it contains papers that were assembled by a guest editor, Dr. Ellwood Weise. This itself is a milestone in the growth of our journal, and marks the beginning of a new adventure in enlarging the scope of our efforts. We may expect that by this means the value of the journal will be enhanced. From time to time guest editors from our ranks will assemble whole issues and it is hoped greatly advance the value of our journal.

In the second place the assembled papers can be looked upon not only as an honor to a respected colleague but also as a contribution to medical science. A good physician must have personal skill or art. This, however, is the hardest part of medical science to contribute to present and future generations. For only those in personal touch with the master can absorb this aspect of medical practice. Unfortunately the art of practice does not endure too long. Who is now under the influence of the bedside manner of an Osler or a Blumer? Fortunately progress as a whole is based on the growth of science not on the art of practice. For this reason it is expected that in honoring a colleague the most enduring way is to contribute to the science of medicine. In this way those who do honor to another physician become the teachers of the whole of the medical profession.

There is an old saying that "Thou owest greater thanks to thy teachers than to thy Father, for he gave thee only bodily existence but they gave thee the spiritual life." That there need not be any difference between teacher and father is well epitomized in this issue in which one of the contributors shows conclusive evidence that the father can be a most excellent teacher as well.

Unfortunately Dr. Maurice Strauss to whose memory this issue of the journal is devoted is not here, himself, to derive pleasure from such an event and to be stimulated to widen his influence upon his students and confrères which we all know was already extensive. Nevertheless, the widespread custom of honoring illustrious men is based upon a belief long held by mankind that others will be stimulated to emulate the life of devotion to learning, to medicine and to the interests of humanity which characterized Dr. Strauss. Connecticut is rich in sons that should be honored. Connecticut Medicine accepts this challenge.

LOUIS H. NAHUM

THE PRESIDENT'S PAGE

"THE time has come," the walrus said, "to talk of many things . . ." is the first portion of an oft-used and time-worn expression. Nevertheless, I can think of none better to express the arrival of the given point of time at which the Doctor of Medicine must talk and think of becoming more of a complete man, interested in civic and political affairs, in order to stem the tide toward government control of the private practice system of medicine and to aid in the fight on its contemporary, the constant erosion of the dollar. Pressures toward governmental control of medicine are related inversely to the purchasing power of the dollar. This phase of economics has come in for its share of discussion in the recent hearings on the Forand Bill, in the activities of the Labor and Public Welfare Committee, and will be pursued further in the studies currently being made by the Senate Subcommittee on Problems of the Aged and Aging. Somehow and in some manner the physician *must* find time in his busy medical schedule to enter into the fray. It would be well for him to enlist the aid of his friends in the para-medical groups and in those other groups which he now knows stand with him in opposition to Forand type legislation.

Nothing is more disheartening than to hear hospital staff room discussions terminate with a shrug of the shoulders and the assumption of a defeatist attitude toward national compulsory health insurance. Such discussions are all too frequently preceded or accompanied by such remarks as: "why doesn't the AMA, the State Society or the County Society do thus or so?" This method of disposing of problems can hardly be considered as characteristically American or as a thinking man's defense of our free enterprise system. The immediate threat of federal medical legislation is upon us—today—right now! To underestimate this very real threat will be both fool-hardy and catastrophic.

This is not the time for defeatism, nor is it the time to bury one's head in the sand, and resort to negativism instead of positive actions. Such accusations have been levelled at us in the past. We must, at this time, come out of our creed-bound shells and assume a more forceful role in civic and political affairs. In order to fight the many forces that seek to place medical care under governmental control and to hold the line against the accompanying inflationary spiral, which President Eisenhower so earnestly asked us to do, physicians must exert their proper influence in a democratic society.

After adjournment of the Congress our senators and representatives will return "back home." This is an appropriate time to contact our legislators and to make our views known to them. A personal approach, or a contact through a mutual friend or close acquaintance is a desirable way to define medicine's position at the grass roots level. Upon their return to Washington, congressmen of principle should base their legislative decisions on what they have heard from all their constituents. It is certain that our opponents will make *their* position known, but keep in mind that, as a physician, you are in an envious position. The medical profession holds the rare distinction of not asking anything for itself. It wants no discriminatory laws passed to benefit *its* members. This above all else should be impressed upon the public. Its basic philosophy is directed only toward that which is best for all patients and for all citizens.

ELLWOOD C. WEISE, M.D.

FROM THE SECRETARY'S OFFICE

WILLIAM R. RICHARDS, M.D., *Executive Secretary*

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Director of Public Relations

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Assistant to Executive Secretary

CALL

SEM-ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1959 Semi-Annual Meeting of the House of Delegates will be held in the Stratfield Hotel, Bridgeport, on Wednesday, December 9, commencing at 2:30 in the afternoon.

Ellwood C. Weise, Sr., President
William R. Richards, Executive Secretary

INTRODUCTION OF RESOLUTIONS

Article VII, Section 4, of the By-Laws of the Society provides:

Par. 1. All resolutions to be introduced before the House of Delegates at an annual, semi-annual, or special meeting, except resolutions and recommendations from the Council and resolutions and recommendations that may be contained in committee reports, shall be delivered to the Executive Secretary in time for publication in the official agenda for the meeting at which action is to be taken.

Par. 2. Resolutions and recommendations to be introduced before the House of Delegates at an annual, semi-annual, or special meeting by the Council and recommendations that may be contained in reports of standing or special committees of the Society shall be published in the official agenda for the meeting at which action is to be taken. The official agenda shall be distributed to the members of the House of Delegates at the earliest possible date preceding the meeting.

Par. 3. Resolutions and recommendations which do not meet the requirements of paragraphs 1 and 2 of Section 4 of this article may be accepted for action by a session of the House of Delegates by a majority vote of the delegates present. Such resolutions and recommendations shall be referred at once by the presiding officer to reference committees appointed by him from the membership of the House. These reference committees shall consider the resolutions and recommendations referred to them and shall report, with recommendations, to the House before adjournment of the session.

PROPOSED AMENDMENTS TO THE BY-LAWS

At the Society's Annual Meeting on April 28, 1959, in seeking authorization from the House of Delegates to engage the services of a General Manager on a contractual basis, the Council assured the House of its intent to subsequently recommend the abolishment of the elective office of "Executive Secretary," as presently defined and described in the by-laws, and to further define and describe in the by-laws the elective office of "Secretary" as required under the Charter.

The purpose of this action is to remove all areas of conflict which may now exist between the duties and powers of the "Executive Secretary," elected annually as an officer of the Society, and those of the

"General Manager," a non-elective administrator, who is now responsible for carrying out identical and additional duties under the direction of the Council and the House of Delegates.

To accomplish this action, the Council recommends the following amendments to the By-Laws:

ART. V, Sec. 5, Par. 1: In line 3, change "Par. 6" to read "Par. 7" to conform with the renumbering of paragraphs 2 through 7.

ART. VI, Sec. 1, Par. 1: In line 3, delete the words "an Executive" and substitute the word "a".

ART. VI, Sec. 2, Par. 4: Delete the entire paragraph and substitute the following: "The Secretary shall carry out the duties of his office as described in Section 5 and Section 7 of the Charter and in Arti-

cle X, Sec. 3, Par. 12 and Article XIII, Sec. 9, Pars. 3 and 4 of the by-laws."

ART. VI, Sec. 2, Par. 5: In lines 3 and 4, delete the words "Executive Secretary" and substitute the words "General Manager".

ART. VI, Sec. 2, Par. 7: Delete the phrase "Executive Secretary and other officers" and substitute the phrase "General Manager and the officers".

ART. VI, Sec. 2, Par. 9: In lines 1 and 2, delete the word "Executive".

ART. VII, Sec. 4, Par. 1: Delete the words "Executive Secretary" and substitute the words "General Manager".

ART. IX, Sec. 1, Par. 1: Delete the word "Executive".

ART. IX, Sec. 3: Insert new paragraph 2 as follows: "The Council, in carrying out its responsibility for conducting the affairs of the Society under the policy directives and limits laid down by the House of Delegates, shall appoint a General Manager to administer the affairs of the Society. The General Manager shall exercise and carry out all powers and duties, and shall observe all such directions and restrictions as the Council may from time to time impose upon him, but in default thereof the General Manager shall manage and supervise the ordinary affairs and business of the Society and do any and all acts and things necessary or conducive to such management. The duties of the General Manager shall include but not thereby be limited to the following: a) To manage the Society office, grounds, equipment and other property; b) To employ such assistance as may be approved by the Council and to supervise the employees of the Society office; c) To maintain membership and biographical records; d) To collect Society dues, except from the members of any County association which collects the Society dues; e) To collect American Medical Association dues from all members of the Society who are members of the American Medical Association; f) To make necessary business arrangements, including those for commercial exhibits; g) To record attendance and proceedings and maintain records of all meetings of the House of Delegates, the Clinical Congress, the Council and the committees of the Society; h) To maintain the Society's financial records in cooperation with the Treasurer, the Society's bankers and auditors; i) To pay authorized expenditures from funds allocated by the Treasurer; j) To conduct the official correspondence of the Society, including notifying members of meetings, officers of their election and committees of their appointment and duties; k) To provide guidance services to physicians seeking professional placement in Connecticut; l) To maintain working contact and cooperation with the com-

ponent county associations of the Society and with the Woman's Auxiliary; m) To maintain active liaison with State government agencies; n) To maintain active liaison with the headquarters of the American Medical Association; o) To maintain active liaison with voluntary health agencies serving Connecticut; p) To implement and coordinate the activities of the Society with respect to legislative programs; q) To implement and coordinate the Society's public relations and publicity programs; r) To aid and assist all the officers of the Society in the performance of their powers and duties.

ART. IX, Sec. 3: Renumber paragraphs 2, 3, 4, 5, 6 and 7 to paragraphs 3, 4, 5, 6, 7 and 8, respectively.

ART. X, Sec. 3, Par. 1: In lines 7 and 8, delete the words "Executive Secretary" and substitute the words "General Manager".

ART. X, Sec. 3, Par. 6: In line 8, delete the words "Executive Secretary" and substitute the words "General Manager".

ART. X, Sec. 3, Par. 7: In line 9, delete the words "Executive Secretary" and substitute the words "General Manager".

ART. X, Sec. 3, Par. 9: In line 3, delete the words "Executive Secretary" and substitute the words "General Manager". In line 9, delete the words "Executive Secretary" and substitute the words "General Manager, ex-officio".

ART. XIII, Sec. 9, Par. 2: In line 2, delete the word "Executive".

ART. XIII, Sec. 9, Par. 3: In line 3, delete the word "Executive".

ART. XIII, Sec. 9, Par. 4: In line 9, delete the word "Executive".

PUBLIC RELATION ACTIVITIES IN RECENT WEEKS

1. NEWS RELEASES—Six news releases were written and distributed to daily and weekly newspapers, radio and television stations, selected national publications and regional medical journals.

Information copies in most cases were mailed to members of the Council and officers of the Society, officers of county and city medical associations, state and county public relations committees, and to others as indicated by the content of the release.

The topics of these releases were as follows:

a. Announcement of the assumption of full-time duties by Dr. William R. Richards as general manager of the Society.

b. Announcement of the continuing program of the Relative Value Study Committee. The emphasis of this release was on development of "a continuing study of medical and surgical procedures to relate them to each other in terms of specialized

knowledge, time, and skill." Future releases will repeat this "knowledge-time-skill" formula of the study to prevent misinterpretation of the project as simply a method of determining insurance payments.

c. A release seeking to correct misinterpretation of President Eisenhower's address at the Atlantic City meeting of the AMA last June.

d. The Forand Bill included two releases (see Legislative Communications Program, No. 2).

e. A release headlined "Medical Groups Act On Polio" was written in cooperation with Dr. William A. Wilson, chairman of the Committee on Public Health. This was given the widest possible distribution and gained much favorable comment throughout all media of public information.

Information copies of the release were mailed to the 175 directors of health throughout the state.

2. LEGISLATIVE COMMUNICATIONS PROGRAM — On Saturday, June 27, the American Medical Association alerted all state medical associations that hearings on the Forand Bill would start on July 13.

In cooperation with Dr. Richards and the entire office staff, a crash program of legislative communication was activated. A letter was written by the Executive Secretary to all members of the Society, informing them of the issues and requesting each member to communicate with the Chairman of the House Ways and Means Committee.

A letter was also sent to all Connecticut senators and representatives, explaining the position of the Society on the Forand Bill, offering the reasons for our opposition to the bill, and enlisting their assistance in presenting these views to members of the Ways and Means Committee.

A July 14 release was made concerning the Society's official statement presented that day by Dr. Weise on the second day of the hearings on the Forand Bill (HR 4700) conducted by the House Ways and Means Committee. The keynote of this release was: "Connecticut's senior citizens are receiving increased insurance for the costs of health care and do not need to be 'rescued' by the Federal government." A copy of the official statement, as presented in Washington, accompanied each copy of the release.

This release was headlined "No Need For Government Health Bill" and the word "opposition" was not used in the text, which kept the approach on the positive side.

State organizations with national affiliates which were in sympathy with the AMA stand were contacted and urged to communicate their opposition to the bill to members of the Congress and the House Ways and Means Committee. Copies of practically all these materials were sent as informa-

tion to presidents and secretaries of county and city medical associations, officers of the Woman's Auxiliary and presidents of hospital staffs, hoping to develop a consistent but not stereotyped response from these several sources.

There are indications that many letters from Connecticut physicians were in the flood of mail received by the House Ways and Means Committee, opposing the Forand measure. It is reported that the bill is not expected to reach Congress this year.

A statement by Dr. Weise, concerning criticisms of health plans for the state's senior citizens made by members of the State Commission on Services for Elderly Persons, was the subject of a July 17 release. A strictly factual first paragraph was written only to identify the statement. It was then quoted in full, in order to diminish any trend toward extended controversy.

The primary goal of the legislative program was to enlist the support of all members of the Society and as many of the component and allied agencies as possible. An important secondary goal was to present a positive statement of Society attitudes and actions to the public, accurate, dignified and able to withstand criticisms such as were made by members of the State Commission on Services to Elderly Persons.

3. CONNECTICUT HEALTH CAREERS—In cooperation with the Connecticut Health Careers Committee, a luncheon and conference with officers of associations of educators was held at the Hotel Bond, Hartford, July 1. Representatives of the Woman's Auxiliary also attended the conference. It proved successful in further improving the sound relationships with officials of the State Department of Education, high school principals, and guidance counselors, which the career program is developing. The luncheon meeting also established valuable liaison with educator's voluntary associations which will be helpful in continuing the program.

4. AMA PICKS CONNECTICUT PROGRAM—Connecticut Health Careers has been selected by the American Medical Association as one of the 10 top medical association projects in the country with high public relations value. Dr. Bernard F. Mann, chairman of the committee, has been invited to present the various aspects of the program at the AMA Public Relations Institute held August 20-21 in Chicago.

The National Health Council also has recognized the project and I have been requested to speak about it at the Second National Conference on Recruitment, to be sponsored by NHC, October 1-2, at the Barbizon Plaza Hotel, New York City.

5. INFORMATION SERVICE—An "Information File" folder was designed for use in the distribution of publications obtained from the American Medical

Association, the California Medical Association, and the San Joaquin (Calif.) County Medical Association concerning relative value studies. The folders are so designed that they can be used for the distribution of any published material to members of the Society or in response to requests from other organizations.

6. EXHIBITS AT FAIRS—Four portable exhibits have been designed and are now being made for display at ten country fairs this fall, in cooperation with the Committee on Rural Health and the Woman's Auxiliary. These exhibits will be directed toward encouraging polio immunization and also will draw attention to tetanus immunization. Suitable leaflets concerning polio and tetanus will be made available for distribution with the exhibits.

7. COMMISSION ON SERVICES FOR ELDERLY PERSONS—During and after hearings on the Forand Bill, certain unfounded statements seeking to support such legislation were made by members of the State Commission on Services for Elderly Persons. The first release in this connection is referred to in the above mentioned legislative program. A second release was issued August 18 and information copies were mailed to members of the Council and officers of county and local medical associations.

James G. Burch
Public Relations Director

COUNCIL MEETING

Wednesday, September 2, 1959 — 3:30 P.M.

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 3:30 P.M. on Wednesday, September 2, 1959. Present in addition to the Chairman were Drs. Weise, Gallivan, Goldberg, Richards, Scully, Davis, Gens, Buckley, Blodinger, Murray, Eddy, Pollock, Grendon, Rentsch, Phillips. Absent were Drs. O'Connor, Carter, Cullen, Cornwell, Kennedy, Schiavetti, Gilman, Gardner, Metcalf, Chartier.

CHAIRMANSHIP OF AMEF COMMITTEE. A letter of resignation as Chairman of the AMEF Committee was received from William G. H. Dobbs who has been appointed as regional AMEF chairman by the AMA. Dr. Dobbs' resignation was accepted.

Dr. Dobbs had recommended the appointment of Charles E. Jacobson, Manchester, to serve as AMEF Chairman, to complete his unexpired term. It was VOTED to appoint Dr. Jacobson to this post.

AMEF RECOMMENDATIONS. It was VOTED to approve a recommendation of the AMEF Committee that county AMEF chairmen suggest to the members of their associations at the semi-annual meetings that in instances in which a physician wishes to show appreciation for services rendered by a fellow

physician to himself or his family, he might wish to make a donation to the AMEF in the name of the doctor who rendered the service. Under this plan, the physician in whose name the gift was made would have the privilege of indicating whether he desired the amount of the gift to be placed in the AMEF general fund or assigned to a medical school of his choice.

It was further VOTED that the Executive Secretary ask the Chairman of the AMEF Committee whether or not the committee wishes to recommend continuance in 1960 of the voluntary \$15 increase in Society membership dues which was approved by the House of Delegates in December, 1958 for the year 1959.

COMMITTEE TO STUDY MATERNAL MORBIDITY AND MORTALITY. It was VOTED to request Hugh K. Miller, Stamford, to accept the appointment as Chairman of this Committee to complete the unexpired term of Lewis P. James, Hartford, resigned.

It was VOTED to accept with regret the resignation of Charles H. Peckham, Manchester, as a member of the Committee to Study Maternal Morbidity and Mortality. It was further VOTED to appoint Charles B. Cheney, New Haven, to replace Dr. Peckham on the Committee and to complete his unexpired term.

COMMITTEE ON PERINATAL MORBIDITY AND MORTALITY. It was VOTED to accept with regret the resignation of Charles H. Peckham, Manchester, as a member of this Committee. It was further VOTED to appoint Bernard L. Conte, New Haven, as a member of this Committee to complete Dr. Peckham's unexpired term.

COORDINATOR FOR MEDICARE. It was VOTED to appoint Harold M. Clarke, New Britain, Chairman of the Medicare Committee, to serve as Coordinator for Medicare in Connecticut, to replace Daniel F. Levy, deceased.

CONFERENCE COMMITTEE WITH CONNECTICUT BAR ASSOCIATION. It was VOTED to appoint Peter V. C. Dingman, Waterbury, a member of this Committee, to serve as Chairman of the Committee to complete the unexpired term of Daniel F. Levy, deceased.

COMMITTEE ON INDUSTRIAL HEALTH. It was VOTED not to appoint a replacement on the Committee on Industrial Health for Daniel F. Levy, deceased.

COMMITTEE ON STATE BLOOD BANK. A letter from John E. Thayer, Hartford, Chairman of the State Blood Bank Committee, recommending the appointment of Philip S. Owen as a member of this Committee was considered. It was determined that Dr. Owen is not yet a member of the Society and therefore no action was taken on this recommendation.

SEVENTH NATIONAL CONFERENCE ON PHYSICIANS AND SCHOOLS. It was VOTED to approve the appointment of Martha L. Clifford, Hartford, to serve as the Society's representative to the Seventh National Conference on Physicians and Schools to be held at Highland Park, Illinois on October 13-15, 1959. It was further VOTED to approve a special allotment of \$200 to defray Dr. Clifford's expenses in attending this meeting.

1960 ANNUAL MEETING OF SOCIETY. A letter from the Board of Directors of the Hartford County Medical Association informed the Council that the Board had voted to waive Hartford's turn to be host for the 1960 annual meeting. On the basis of this information, it was VOTED to approve Hamden High School, Hamden, Connecticut as the site for the 1960 annual meeting and to designate the dates of the meeting as April 26, 27, 28, 1960.

It was further VOTED that Israel E. Blodinger, Councilor from the New Haven County Medical Association, be authorized to discuss with the Board of Governors of that association the matter of holding the meeting in New Haven County for a second successive year and the appointment of a Committee on Local Arrangements.

It was further VOTED to inform the governing bodies of all county associations of this action and to request an expression of opinion from those boards as to the desirability of making Hamden High School, Hamden, Connecticut the permanent site for future annual meetings of the Society.

DATE AND PLACE OF SEMI-ANNUAL MEETING OF SOCIETY. It was VOTED to hold the Semi-annual Meeting of the Society at the Stratfield Hotel in Bridgeport, Connecticut on Wednesday, December 9, 1959. It was further VOTED to inform the governing body of the Fairfield County Medical Association to this effect.

DISCUSSION OF CMS. A) Dr. Feeney, Chairman, directed the attention of the Council to the printed minutes of the CMS-CSMS Joint Liaison Committee meeting on July 23, 1959. The report of the meeting was received as information. An abstract of the minutes of that meeting were published under the Secretary's Office in the September, 1959 issue of "Connecticut Medicine".

B) Without vote, there was general approval of a document titled, "A Statement of the Basic Principles of CMS-1959" which has also been printed in the September issue of "Connecticut Medicine".

C) Israel E. Blodinger, reporting as a member of the CMS Board of Directors, informed the Council that he had no new CMS business upon which to comment.

D) The Executive Secretary presented a revised version of the script of the film "The Story of

CMS." The revision of the script had been authorized at the July 23, 1959 meeting of the CMS-CSMS Joint Liaison meeting and had been accomplished through several conferences between Mr. John Castellucci, Executive Vice-President of National Blue Shield Medical Care Plans, Dr. William H. Horton, Executive Director of CMS and Dr. Richards. The Secretary pointed out a number of areas in which the original script had been in conflict with past policies of the Council and House of Delegates and in what ways the original script had been changed so as to make it a more accurate and informative document. After prolonged discussion and acting upon amendments and amendments to amendments, it was VOTED to approve the following motion:

"That the revised script of the film 'The Story of CMS,' as presented to the Council at this meeting, be approved with the exception that on the title page the imprimatur be changed to read 'The Story of CMS,' Prepared for the Physicians of Connecticut By Connecticut Medical Service, Inc. in Association with The National Association of Blue Shield Plans, Produced by Kevin Donovan Films."

Jachin B. Davis, New Haven, Councilor-at-Large, requested that his vote against this motion be recorded in the minutes.

E) The following was presented to the Council for action by Israel E. Blodinger, Councilor from New Haven County.

Resolution adopted by the New Haven County Medical Association on March 26, 1959.

WHEREAS, In many hospitals in Connecticut, the practice of anesthesia is considered a "Hospital Service" because anesthesia benefits are covered by Blue Cross through hospital billing, and

WHEREAS, This is contrary to the definition of "Hospital Service" as stated by the A.M.A. in 1951, and

WHEREAS, If this practice continues to spread throughout Connecticut, it may engulf other specialties, and

WHEREAS, The practice of anesthesiology is considered as a "Medical Service" by the American Medical Association, the American Society of Anesthesiology, and other agencies, and

WHEREAS, Connecticut Medical Service has been created to assist people to obtain Medical Services, and

WHEREAS, The Connecticut State Society of Anesthesiology has repeatedly requested anesthesia benefits from Connecticut Medical Service for the past ten years, and

WHEREAS, Connecticut Medical Service is now contemplating revision of its contracts with extension of benefits and services, now therefore

BE IT RESOLVED: That our Councilor be instructed to request of the Council of the Connecticut State Medical Society that it negotiate with the Directors of CMS to the end that anesthesia benefits shall be included in all Connecticut Medical Service contracts."

After full discussion it was VOTED that the resolution be approved and that, through the CMS-CSMS Joint Liaison Committee, the Council negotiate with the Directors of CMS to the end that anesthesia benefits shall be included in all CMS contracts.

SUB-COMMITTEE ON OPINION SURVEY. The Secretary, as Chairman of the Sub-committee on Opinion Survey, reported that excellent progress was being made in the preparation of the opinion survey questionnaire and that he anticipated that the questionnaire would be completed by the next meeting of the Council. He further discussed the question of how the opinion survey and relative value study projects were to be financed and expressed the opinion that these matters should be given definitive consideration before the semi-annual meeting of the House of Delegates.

COMMITTEE ON RELATIVE VALUE STUDY. Copies of a memorandum to members of the Committee on Relative Value Study concerning the August 5, 1959 meeting of the committee were submitted to members of the Council for information. In this memorandum it was noted that a number of appointed representatives of sections and specialty groups had not attended any of the meetings of the Committee and others had attended but one meeting. It was pointed out that the failure of these members to attend was denying proper representation to the groups which appointed them and, at the same time, would undoubtedly delay completion of the Committee's work.

There was general agreement that such failure of representation causes unnecessary delay in the preparation of a relative value study questionnaire and it was VOTED that the Chairman of the Council appoint appropriate substitutes for those members of the Relative Value Study Committee who, for whatever reason, fail to attend meetings of that Committee.

REQUESTS FOR ADDITIONAL BUDGET ALLOTMENTS. *Committee on Medical Care of Veterans*—It was VOTED to authorize an additional budget allotment of \$150 to this Committee.

Committee on Connecticut Health Careers—It was VOTED to table action on a request for an additional allotment of \$474 for this Committee and to request of the Chairman of the Committee further and detailed information as to the estimated annual cost of the health careers program, the scope of its

operation and the length of time during which the Society would be expected to finance the program in toto.

Committee on National Legislation — It was VOTED to authorize a special budget allotment of \$350 to this Committee to cover the June-July For-and Bill legislative activities.

COMMITTEE ON PUBLIC RELATIONS. A printed report on the activities of the Public Relations Committee and the Public Relations Officer was submitted by Mr. James Burch for information. The report was supplemented by a display of news clippings, etc. for the inspection of members of the Council. (See third item in this Department.)

REVISION OF BY-LAWS. Dr. Gens, Chairman of the Sub-committee to Study and Revise the By-laws, voiced the opinion that the by-laws should be gone over from beginning to end and that his sub-committee hoped to have a number of revisions of the by-laws ready for the Council to recommend to the annual meeting of the Society in 1960. Expressing the opinion that the one major revision which should have immediate action for recommendation to the House of Delegates in December 1959 concerns the establishment of the proper relationships between the duties and powers of the Executive Secretary as now described in the by-laws, the future powers and duties of the Secretary as required by the Charter and the duties and powers of the General Manager under the direction of the Council and the House of Delegates. After considerable discussion, it was VOTED to approve a printed series of amendments to the by-laws to accomplish these purposes for recommendation to the semi-annual meeting of the House of Delegates in December, 1959. The Secretary was directed to submit these amendments to "Connecticut Medicine" for publication as required in the by-laws. (See second item in this Department.)

NATIONAL LEGISLATIVE CONFERENCE. It was VOTED that the President, the Chairman of the Council and the Executive Secretary attend the AMA National Legislative Conference at the Hotel Statler in St. Louis Missouri on October 2-3, 1959 on an AMA expense account and that the President-Elect and a member of the Committee on National Legislation attend the conference at the Society's expense. It was further VOTED to request Clifford W. Mills, Norwalk, Chairman of the Committee on State Legislation, to attend as the member of the Committee on National Legislation.

DELEGATE TO U.S. PHARMACEUTICAL CONVENTION, INC. It was VOTED to authorize the Executive Secretary to consult with the Dean of the Yale Uni-

versity School of Medicine to determine whether or not he would care to recommend a suitable physician delegate to represent the Society at the United States Pharmacopeial Convention, Inc. on March 29-30, 1960.

RESOLUTION RE: STANLEY H. OSBORN. It was VOTED to enthusiastically and unanimously adopt the following resolution presented by Isadore S. Goldberg of Torrington:—"In recognition of his many years of enlightened public service, the Council of the Connecticut State Medical Society takes this opportunity to thank Dr. Stanley Osborn for his lifelong devotion to the health of the citizens of Connecticut and for his constant assistance to the Doctors of Connecticut in safeguarding the people."

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following:

P. Ramamurti, age 37, M.D. Univ. of Madras, Dec. 1947. Five years orthopedic training. Interested in orthopedic surgery. Group of institution.

Sidney Shindell, age 36, M.D. LI. Colleg of Med. '46. Physician and lawyer. Interested in administrative placement *only*.

Ali Akbar Rafiee, age 37, M.D. Tehran, 1945.

Four years residency training in otolaryngology, Episcopal Eye, Ear, Throat, Philadelphia, Lempert Institute of Otology, New York; Diplomate of American Board of Otolaryngology. Interested in associating with some one.

PLACEMENT OPPORTUNITIES

The Placement Service has been made aware of three opportunities for salaried positions with the State of Connecticut:

Senior physician, Blue Hills Hospital, Hartford—internist or general practitioner.

Medical Director, Welfare Department, Hartford—largely administrative.

Physician, Wethersfield State Prison, some general medicine and some administrative.

SPACE AVAILABLE

Fully equipped office, New Haven, centrally located. Physician presently practicing in this location is internist planning to move. Opportunity to work alone or in association.

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SEMI-ANNUAL COUNTY ASSOCIATION MEETINGS

Hartford, Wednesday, September 23

HOTEL BOND, HARTFORD

Business Meeting: 4:30 P.M.

Social Hour: 6:30 P.M.

Speaker: Mr. Louis A. Orsini, Assistant Director of the Information and Research Division of the Health Insurance Association of America

Subject: HOW MAJOR MEDICAL INSURANCE WORKS

New London, Thursday, October 1

LIGHT HOUSE INN, NEW LONDON

Dinner: 7:00 P.M.

Business Meeting: 5:00 P.M.

Speaker: Mr. Charles Simon, Resident Manager, Cooley & Co.

Subject: PREPARING FOR THE FINANCIAL FUTURE THROUGH THE MEDIUM OF INVESTMENTS IN SECURITIES

Fairfield, Wednesday, October 7

SHOREHAVEN GOLF CLUB, EAST NORWALK

Social Hour: 6:00 P.M.

Business Meeting: 4:00 P.M.

Dinner: 7:00 P.M.

Speaker: Professor Penn T. Kimball, Graduate School of Journalism, Columbia University

Subject: PHYSICIANS AND POLITICAL ACTIVITIES

Litchfield, Tuesday October 6

TORRINGTON COUNTRY CLUB, GOSHEN

Dinner: 7:30 P.M.

Business Meeting: 5:00 P.M.

Speaker and subject to be announced.

Middlesex, Thursday, October 8

COUNTRY SQUIRE INN, KILLINGWORTH

Dinner: 7:00 P.M.

Business Meeting: 4:30 P.M.

Speaker: Mr. John Dando, Department of English, Trinity College

Subject: WHY BOTHER WITH LITERATURE

Windham, Thursday, October 15

NATHAN HALE HOTEL, WILLIMANTIC

Dinner: 6:30 P.M.

Speaker and subject to be announced.

Tolland, Tuesday October 20

OLD HOMESTEAD INN, SOMERS

Dinner: 6:30 P.M.

Speaker and subject to be announced.

New Haven Thursday, October 22

1711 CLUB INN, MERIDEN

Dinner: 7:00 P.M.

Business Meeting: 4:30 P.M.

Subject: PANEL DISCUSSION: "SHOULD CONNECTICUT PHYSICIANS LEAD OR FOLLOW IN THE HEALTH INSURANCE MOVEMENT?"

Participants:

Max Caplan, M.D., Meriden—Chairman, Third Party Payment Committee, New Haven County

I. E. Blodinger, M.D., New Haven—Member Board of Directors, C.M.S.

E. Brandon, M.D., Hartford—Connecticut Health Insurance Council

Benjamin Thaw, M.D., Hartford—Chairman, Relative Value Study Committee

William R. Richards, M.D., New Haven—General Manager, Connecticut State Medical Society; Chairman, Professional Opinion Survey Committee

Moderator:

Ellwood C. Weise, M.D., Bridgeport—President, Connecticut State Medical Society



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Opinion Survey And Relative Value Study

The following two articles are reprinted from the Journal of the Michigan State Medical Society (June, 1959). Their publication in "Connecticut Medicine" continues a series of educational commentaries designed to provide members of the Society with background material which, it is hoped, may be of value to them in responding to the forthcoming "Opinion Survey" and "Relative Value Study" questionnaires.

WRR

Labor Views Financing Of Hospital And Medical Care

JEROME POLLACK
Detroit, Michigan

THE gathering of labor, management, hospital, medical and prepayment representatives to discuss their common problems in financing health care is still a rather new and welcome phenomenon. Before launching into the distinctive views and needs of labor, we would do well to appreciate the growth of common interest among these different groups that has made it possible for them to join in programs for financing health care that now serve a majority of the population.

Until very recently, there were wide disparities in the health of people, according to their income, occupation and station in life. The mortality of unskilled workers, for example, according to studies made in the thirties, was about twice that of professional men. People with lower income suffered higher mortality from nearly all of the principal causes of death. They had a greater prevalence of illness and a much greater volume of untreated symptoms, a finding that still remains today, even though the gaps by income and socioeconomic status have been reduced.

The early programs to finance health care for workers faced problems distinctively different from the latter-day prepayment plans serving the general population. They were designed to serve people with substantial health needs and modest means. Their primary purpose was to prevent economic barriers from standing in the way of needed care—an objective that we sometimes lose sight of today. Everyday health care came first. Protection against financial ruin was the product of more affluent times. The arrangements to provide care were

almost as important as the financial aid in paying for it.

For a long time, these early programs that go back about a century stood almost alone as outposts of prepaid health protection in our country. The report of the AMA's Commission on Medical Care Plans is in a sense a tribute to some of these earlier plans. Only with the substantial elevation in the health status of workers, which has accompanied a general upgrading in status and standards of living, has it become feasible to join, as we now have, in common programs for financing health care that cover a majority of the population. From a special problem, the health of the worker is becoming increasingly a general health problem. The people who comprise labor now receive most of their care from the same hospitals and the same physicians as the rest of the community and are faced with similar problems in financing their care. If there is one new and important trend in labor thinking about hospital and medical care, it is towards greater participation in community programs for financing health care, and towards a greater identity of interest.

NEW FORM

When general health insurance spread to a majority of the population, it took an entirely different form and had an entirely different motivation from the plans that had specialized in protection for workers. More than anything else, the deep financial crisis that existed in all phases of health care in the early thirties precipitated action on health insurance. In the four years following 1929, consumer expenditures for personal health care dropped by a third. Payments to physicians fell 36 per cent. Occupancy rates in the voluntary hos-

Mr. Pollack is Program Consultant, Social Security Department, UAW.

Reprinted from the June 1959 issue of the Journal of the Michigan State Medical Society with permission of the editor and the authors.

pitals were hovering around 55 per cent.

In a volume entitled "The Crisis in Hospital Finance," published in 1932, Michael Davis and Rufus Rorem concluded:

"If American hospitals are to be financed by patients' payment in the future, even as much as they were in 1929, these payments must be made more assured and more stable. The life of voluntary hospitals is threatened because of the instability and unevenness of this major source of income."

The President of the American Hospital Association was quoted as saying:

"Without being pessimistic as to the future, the American Hospital Association would be unmindful of the members' interest if it did not recognize the possible breakdown of the voluntary hospital system in America. . . ."

This was the moving force that brought prepayment to most of America. It was not an attempt to invent a better mouse trap with 121,000,000 people beating a path to the door. It was an effort to keep the roof from falling in.

Medical societies, fearing that legislation on a national health program was imminent, were spurred into adopting plans of their own in the hope that they would avert such legislation. Private insurance companies entered the field with similar sentiments.

Voluntary health insurance left the ground like a rocket. When last sighted it had passed the four billion dollar mark, already reaching a fantastic size, and now, although everyone seems to think it's off course, it's still rising very, very rapidly.

Probably there is no parallel in American life to this surge of enrollment in which more than 80,000,000 people were newly covered by voluntary health insurance in the decade following World War II. Sweeping changes in the economy made it possible for people to afford protection. Millions left the depression tired of charity wards where occupancy rates were running at 100 per cent. They wanted to be able to afford semi-private accommodations; they had had enough of not being able to pay their medical bills, and were anxious to be able to do what they could to pay in the future. They were willing to contribute directly and to allocate gains in collective bargaining for health insurance.

Getting off the ground was an extremely important development. Obviously, four billion dollars worth of health care a year—and it's still growing—does a monumental amount of good. But, as we so often read in the papers these days, important as a launching is, it is not enough. Whether health insurance has gone into orbit is still a question.

We know that the growth of voluntary health insurance, faced with its intrinsic needs, has been very shallow. Earlier estimates, modest as they

were, have actually over-stated the depth of protection. Corrections in the 1958 Survey of Current Business show that this year health insurance will cover only about one-fourth of America's total private health care bill, a little more than half of private hospital care, and perhaps 30 per cent of physicians' services.

The protection remains addressed overwhelmingly to hospitalized illness and to surgical care. In spite of the tremendous growth, the average insured family probably still has uninsured about twice as much of its total personal health care, as it has covered.

There is room for legitimate argument about how far prepayment can and ought to go toward covering all of health care. But there is no question that it was ever destined to stop at its present level. Judging from its past rate of development and from the needs that remain unsatisfied, prepayment can reasonably be expected to double in volume within the next five to ten years, and to cover, perhaps, two-thirds of the average family's expenditure for health care.

EVOLUTIONARY COURSE

This is a modest expectation. It assumes an evolutionary course of development and does not strain the upper limits of insurability. Those plans that have already gone further toward achieving this level—such as the Windsor Medical Plan in Ontario, H. I. P. in New York, the Kaiser Foundation Health Plan—make it abundantly clear that the present struggles of people to meet the uninsured costs of care are largely an unnecessary privation. But how to achieve more comprehensive protection is an open and much disputed question.

The quest for more inclusive care is not advanced solely by labor. Much of the impetus, in fact, has come from management personnel dissatisfied with their own protection, impatient with the inadequacy of benefits limited to hospitalized illness and seeking to protect themselves against financial ruin. Major medical insurance is essentially a management revolt against these deficiencies in health insurance. For a time, major medical insurance dominated the scene. It was proclaimed that health insurance had started at the wrong end and was proceeding in the wrong direction. And most appealing to those distressed by rising costs, the deductible and co-insurance provisions were expected to check the rise in cost.

Labor was worried about the Davy Crockett stage of major medical insurance. The resurgence of economic barriers to care was directly contrary to the original aims and whole direction of health insurance. It was one thing to accept gaps in protection that represented areas of coverage that hadn't yet been reached. It was quite another thing

to see economic barriers deliberately reimposed and to hear a lot of the nonmedical talk about the unimportance of small claims, a convenient fiction—that might be rather nice if it were true—but there is no demonstrated evidence that care involving a small expenditure is necessarily medically unimportant.

Catastrophic care needs attention. It is a legitimate concern of prepayment. But the worker is less concerned with protecting himself against financial ruin. He wants and he needs service benefits. He wants (and this was recently confirmed by the Opinion Survey made by the Michigan State Medical Society) coverage of minor as well as major conditions; and he continues to be concerned with the availability and accessibility of care more than with the threat that illness may wipe out his nest egg.

The magic of major medical is now largely dispelled. While some went on to embrace the hula hoop, others are returning to sanity, and realizing that no simple trick like co-insurance and deductible will solve the essential problems that face prepayment. Mounting losses on major medical insurance have dampened hopes that it would neatly control costs. It, too, has been susceptible to one round of rate increases after another. In fact, its cost has shown less stability than hospitalization service plans. And so we return without any panacea to the difficult problems of extending health insurance into new segments of care which are inherently more difficult to insure and that will require far more effective controls than now exist. For voluntary health insurance to double in scope without better controls than it now has is to court ruin, not from without, but from within.

CONSTRUCTIVE CRITIC

Labor has been an active critic, but it is not the principal adversary to voluntary health insurance. Originally a moving force in favor of legislation, labor has become one of the most constructive and sustaining forces for voluntary health insurance. This may sound paradoxical, but it has the virtue of being true. Labor's acceptance is by no means uncritical, as you know, nor has it relinquished its intrinsic right to press for legislation if need be. But in so vital a field, the need for timely protection is paramount and supersedes the form that may be taken. Although labor continues to be portrayed as a threat, its actual record has been one of support for voluntary health insurance. Labor began to purchase prepaid health care even before substantial employer contributions were in prospect. Often it had to insist on the right of payroll deductions for this purpose. As negotiations came to include health insurance, through continued efforts to obtain better protection, labor has sup-

ported voluntary health insurance and helped give it a favorable climate in which to grow.

But the position that anything will do just so long as it is voluntary has also become untenable. Opposition to national health insurance is not enough. The coalition that came together to avert legislation is now largely divided on how the voluntary system should operate and even over what its aims should be. Ultimately, the greatest adjustment has to be made by those who, in opposing a legislative program, were not for a voluntary one and are still not ready to make voluntary health insurance work.

The most serious deficiency in form is the widespread use of indemnity benefits which pay a fixed amount, regardless of how much the care actually cost. As the insured must pay the full cost which has no predetermined ceiling, indemnity benefits at best offer uncertain protection. Moreover, in a transaction where fees are set traditionally according to ability to pay, they are further impaired by an intrinsic susceptibility to misinterpretation and abuse. In a futile attempt to keep up with fees, indemnity fee schedules have been raised from the once standard \$150 maximum scale to \$200, \$225, \$250, \$300, \$400, \$450 and even more. It is perfectly true that many of these schedules were never negotiated with medical societies and that physicians are free to charge more. It is true that there are many inequities and deficiencies in these schedules. But it is also true, and supported by abundant evidence, that indemnity benefits on the whole do not get the same weight as out-of-pocket payments. The indemnity form is defective. Who would buy life or fire insurance if the cost of living to survivors, or to rebuild a house, were predictably higher because the people had gone to the expense of insuring themselves? The deep dissatisfaction arising out of indemnity dealings is harming the prestige of the medical profession beyond the power of public relations to set aright. If health insurance is to continue to prosper, it must assure its subscribers that a dollar paid by insurance buys the same protection as a dollar paid by the patient.

It is not going to be easy for hospital prepayment plans to find their place in the surge for more comprehensive coverage. While it is entirely understandable that plans sponsored by hospitals are inclined to stop with hospitalized care, and while it is indeed difficult for them to proceed further, there is no question that in the interest of properly designed adequate health insurance plans, it is necessary to go far beyond the hospitalized illness. The prepayment plans operated by hospital associations have shown great leadership in fighting for service benefits, community rating and in many of the innovations they made in the years when it was they who largely shaped prepaid health care. Recently

they have been taunted with lack of leadership, for their slowness in moving toward more inclusive care. The real challenge to such plans is in the question whether they were not primarily designed to solve the financial crisis that existed in the early thirties in hospital financing and that, having largely solved this crisis, they are not disposed to go further. This is not a taunt: If the hospitals do not go further; if they abandon their own goals of becoming community health centers providing extensive care for ambulatory patients, and serving as a base for medical practice, research and education; then they have to assume a declining role in prepayment as it grows in scope.

HONEYMOON IS OVER

In spite of its dire beginnings, voluntary health insurance has spent most of its career in the flush of post-war affluence, when people were only too anxious to have a vehicle through which they could pay for care; when they were not especially concerned with premiums and only too glad to be able to pay them. Now, however, people are concerned about the impact of prepayment on the cost of care.

There are legitimate grounds for such concern. To raise the issue, is not necessarily an attempt to find scandals. Medical care in America is in the throes of profound technologic and economic change. Undeniably, there is a great advance in medical knowledge. Undeniably, procedures are today commonplace that were unknown ten to twenty years ago. Undeniably, more progress has been made in certain aspects of medicine in recent decades than in previous centuries. There are indications that the volume of doctors' visits for the average person has almost doubled in recent years. The demand for service has been compounded by a population that has been growing much faster than had earlier been supposed. Moreover, rapidly growing and rather immature health insurance plans are exerting profound pressures on the financing of private health services for which they were not nearly prepared. All of these changes pose a demand for service and challenge the capacity and organization of medical care and the methods of financing as never before in America.

But even after recognizing the many acceptable explanations, the increases in cost still remain a matter of real public concern.

Requests for rate increases by Blue Cross Plans are being met with hearings. Labor may be conspicuous in such hearings, but the concern of the public is far more general. A rather stern adjudication by the Pennsylvania Insurance Commissioner raises the question whether insurance hasn't unnecessarily inflated the cost of care and whether the public interest is adequately protected under

plans originated and still dominated by the purveyors of service. Investigations are being conducted in Michigan, New York, Pennsylvania and elsewhere. Fortunately, these studies are being made by competent professional groups with broad public sponsorship. Perhaps they will find some of the answers to these very difficult questions.

Consumer resistance to the increasing cost of health insurance is still new. Thus far, there has been a tendency to regard any resistance of a rate increase or an objection to the amount requested as destructive, sometimes as a threat to the hospitals or physicians. Medical societies have been particularly reluctant to negotiate over fee schedules with consumer groups, many in their ranks feeling that consumers should have no involvement whatsoever in setting fees, even in consultation and through negotiations with the medical societies. As a result, many such plans have presented their offerings to the public on a take-it or leave-it basis. If the hospitals and physicians regard their respective plans as their own property and conceive of the prepayment plan as their agent, then the consumer is bound to regard the plan on an across-the-counter basis.

But prepayment is far too important, both to the consumer and to the provider of service, for this arms' length dealing.

Labor is going to continue to co-operate with voluntary health insurance plans that we now have and continue to work for their improvement. Plans of the M-75 variety in our state are a great step forward in affirming service, in extending the scope of medical benefits, and in setting up medical review committees under the sponsorship of the medical society. But much more is needed and it is disconcerting to see the reluctance of medical societies in other areas to accept even these gains. A humbling example of how much further such plans of this basic type can go—sponsored by medical societies and offering free choice of physician—is to be found in the nearby Windsor Medical Service.

Labor is also going to continue to work for more comprehensive direct service group practice plans. The primary reason has been the failure thus far to get more comprehensive protection, the failure in many areas to get service rather than indemnity benefits, the drifting of the non-profit plans away from community rating. The last straw was labor's realization that if it did not act, it would have to accept the retreat to co-insurance and deductible provisions, and to economically-oriented rather than medically-oriented plans.

Out of this dissatisfaction, labor groups have been increasingly stimulated in recent years to develop their own programs. Labor people have seen

at first hand that it is possible to have more comprehensive benefits. Labor is impressed with the promise of group practice and feels strongly that it ought to be given a chance to develop, unimpeded, and to demonstrate what it can do in competition with all the other forms of practice.

The basic pattern of labor thinking, however, is toward community plans rather than away from them. The directly operated labor health centers are attempting to broaden their scope and serve more than the members of a single union. Some are looking at the community as a whole. In Michigan, the United Auto Workers made a careful and deliberate decision to support a community plan rather than to build one solely for its own membership. The Union concluded that the community was essentially more dedicated to the quality of care and most concerned with the end product of health care than any of the other parties alone.

Labor is increasingly committed to dual choice of plans, in which each individual in the group may elect either a closed panel plan or one offering free choice. Where each individual is given such a choice, the one who chooses a panel of doctors makes every bit as deliberate and informed a choice as the one who chooses an individual practitioner.

There are encouraging signs that earlier efforts to crush the independent direct service plans are on their way to becoming a closed, if unedifying, chapter of medical history. This is all to the good. For, in time, organized medicine is bound to offer hospitality within its ranks for plans employing different principles of organization and reimbursement, provided that they offer good care. How far and how fast such programs will grow will depend on what the general health prepayment plans will do. It is largely a matter of competition in the American tradition.

NEW RESPONSIBILITIES

Thus far, health insurance has proceeded on the premise that its responsibility is largely limited to reimbursement for care. There has been a scattering of efforts to influence the quality of care under prepayment. But generally, the effort has been made to draw a sharp line between financing and care. Even where this was the intention, the separation between prepayment and practice has actually proved to be impossible. Prepayment does influence practice. It can put people into a hospital. It can influence how long they stay. It can encourage surgery. It can affect the choice of hospital, of physician or of a group of physicians. It can advance or retard the timing of care. These influences go on whether they are understood or not, recognized or not. If not understood, or if ignored, they can encourage bad practice; if recog-

nized and constructively applied, they can encourage good practice.

Health insurance can succeed only to the degree that it secures the active participation and support of the medical profession. That is why the successful examples to date have been those with active medical participation, even when the plans have been in official disfavor with the rest of the profession. Large segments of the profession, however, have not given health insurance, even in its voluntary form and even under medical society sponsorship, the support it needs. A great many physicians shy away from these matters. Many are too busy. Some are still hostile. And prepayment is not getting the medical attention that it needs.

Yet a properly designed system of prepayment, with any real chance of survival, can be devised only out of a deep understanding of medical care. Second hand actuarial theories derived from life and casualty insurance will not do. These coverages evolved their own theories. Health care—the most complicated contingency to which insurance has ever been applied—will in turn need its own. The commonly cited analogy between automobile collision and health insurance is so inappropriate and unmedical that when fully explored, it generally proves intolerable. Health insurance will not be able to ride piggy-back on other coverages. It will have to live by its own lights.

Medicine should attempt to do for health insurance what it has done for medical education and in improving the standards of practice. The economic fate of the medical profession is now irretrievably tied to health insurance. Health insurance is not going to be turned back. The only alternative to its further expansion and improvement will be some other social method of financing and distributing cost. The burden will never again fall solely on the afflicted.

Prepayment has brought the physician, the hospital and the patient closer together than ever before. It has brought new parties into the relationship — the prepayment plan, the employer, the union and the public. It has thrown them together into new and intimate relations for which none of the parties were prepared. All have been faced with bewildering and, at times, almost overpowering problems. After all, the purchase of health care by people who are well is on an entirely different footing from the purchases by those who are sick. The change is profound. How little it is understood is revealed by much of the castigation of "Third Party" payments. The critical issues today are whether prepayment will be able to grow in comprehensiveness; whether it will be able to devise satisfactory forms of protection; whether it will be able to assure value and quality for the

monies expended; whether a voluntary system composed of hundreds of separate plans sponsored by hospital associations, medical societies, commercial insurance companies, consumer groups, labor, industry and others—with authority spread over a great number of hospitals, hospital associations, physicians, medical societies, medical groups, dentists, optometrists and other professions; employers, unions welfare funds, consultants, insurance commissioners and still others—can meet the reasonable needs of society for prepaid health care or whether at some point it will break down as a tower of Babel, unable to reconcile the many voices

and interests. Prepayment, however, has brought together the parties essential for finding improved methods of financing care, and who have an intrinsic and unalterable interest in the care rendered. Unquestionably, it is going to make life difficult in many ways in the years ahead. But it offers promise of an invaluable vehicle that can be harmonized with the best of modern medicine, that can help free the physician, the hospital and the patient of economic barriers in ordering, providing and obtaining the kind of care which is dictated by medical necessity and determined by the standards of our expanding medical knowledge.

Management Views Financing Of Hospital And Medical Care

MALCOLM L. DENISE

Dearborn, Michigan

MANAGEMENT of the modern corporation has an interest in the subject of hospital and medical care, both in its capacity as an employer of people to man its facilities and in its capacity as an industrial citizen of the communities in which it lives and does business.

Over the past couple of decades, there has been increasing awareness by corporate management of its responsibilities in both capacities. I know there have been great developments on both scores at Ford since 1946.

We come into direct contact with this problem of hospital and medical care in several ways, of which the most direct are these:

1. As the operator of our own plant medical facilities and services.
2. As a donor and solicitor of employee donations towards meeting costs of community health programs and facilities—both operating costs and capital expenditures.
3. As a purchaser of hospital and medical services for employees.

The first of these has probably the least bearing on our discussion here today, and I shall not dwell upon it.

The other two phases of our relationship to medical care problems—as a supporter of voluntary community agencies and, jointly with our employees, as a customer—are more relevant to the subject you are examining.

The development of proper and intelligent man-

agement attitudes, policies and actions with respect to both of them is considerably more involved and difficult. Management must relate them to a number of considerations, and attempt to reach specific solutions to the problems confronting it which reflect a sound, realistic application and balancing of these considerations.

What are these considerations? There are several which seem to me of great importance.

I would list as perhaps the most basic our stake in the preservation of a free society and a free economy in America. The individual freedom which we Americans have been able to enjoy has been made possible by a system of institutions which has accommodated an unprecedented degree of diversity and autonomy within an over-all unity. This has released the energies and ingenuity of our people to accomplish—voluntarily and largely without the compulsion of master planning and state control—the highest standard of living for the many that man has ever known.

IMPORTANT ROLE

It is, of course, a truism that freedom is inseparable from responsibility.

One corollary to this broad consideration is that medicine and medical services must be able to attract and retain able people voluntarily, in competition with other callings and vocations. We live in a world of limited choice. We can either attract people or we can conscript them, and if we are forced to resort to conscription, freedom dies.

Secondly, management must never lose sight of the role which it should play in a free society.

Mr. Denise is General Industrial Relations Manager, Labor Relations, Ford Motor Company.

Reprinted from the June 1959 issue of the Journal of the Michigan State Medical Society with permission of the editor and the authors.

Generally speaking, management is interested in advancing the well-being of its employees and the communities in which it operates. But its responsibilities cannot end there—it has equal responsibility to consider the interest of customers, stockholders, and the public at large. No matter how high our motives or how deep our desire to improve conditions of employment or in the community, there is simply no escape from the proposition that wages and benefits and contributions are costs of production. Our economic system relies on management to control costs. If management fails in that duty—if it does not keep the costs of doing business at a level which enables the business itself to grow and prosper—then it fails utterly in its responsibility to customers, stockholders, public, community, and employees alike.

This, quite simply, means that the desirability or alleged need—which is, really, a relative term—of some particular health project or program cannot be the sole or overriding criterion for management decision. It is one of the harsh, inescapable facts of human life that we cannot have more than we can afford; and if we attempt to do so in one area, we pay the penalty in another, regardless of how we organize our society.

The importance of considering the cost factor in developing policies in the medical care area is doubly emphasized by a look at what has been happening to the cost of medical care itself.

According to the Health Information Foundation, the personal expenditures of the American people for their health care in 1957 added up to more than 15 billion dollars. This is only the amount we spent privately—on hospitals, doctors, dentists, drugs, glasses and all the other things we use in our health care.

This 15-billion-dollar-figure does not tell the whole story. It represents only personal expenditures. We must also add the huge sums of money spent on health care by federal, state, county and city governments, by our charities and philanthropies, and by business and industry on industrial health clinics. When we include the money spent in these categories, the total estimated sum for 1957 becomes 20 billion dollars.

Even this 20 billion dollars does not cover the whole bill. It does not, for example, include public and government funds spent on medical research or on the construction, expansion and equipment of hospitals. Nor does it include the administrative and other costs incurred by employers for the health care insurance plans tens of thousands of enterprises provide their employees. Our experts tell me that if we added these amounts to the 20 billion dollars, the total probably would equal about half of this fiscal year's proposed budget for defense.

The figure is impressive. Even more significant to our thinking than the total sum, however, is the rate of increase. The 20 billion dollars known cost of health care last year is double the corresponding figure for ten years ago, and five times the figure for twenty years ago.

We see no basis for confident prediction that medical costs will level off in the near future. On the contrary, there is every reason to believe that they will continue to rise.

The rate of innovation in medical science and medical practice is rapid and promises to become even more rapid in some areas. As medical practice advances, the hospitals must keep up with it. Hence, it is reasonable to suppose that the rate of change and obsolescence in hospitals will be greatly accelerated in the next decade.

Moreover, it seems likely that we shall continue to use more and more hospital and medical services. This is a guess, I know, but it is based on experience. Between 1935 and 1957, annual hospital admissions per 1,000 population increased from 59 to about 130—and the curve is still rising. There is no evidence that the rate of use will diminish or level off. It seems much more likely to increase. What these facts signify for hospital costs—both capital and operating expenditures—is almost immediately apparent. For one thing, the need for highly trained personnel will increase and competition for these people may become more acute and costly. For another, it is very likely that inflation will continue to affect the cost of all the things that a hospital needs.

CRUX OF PROBLEM

In this connection, I would like to come back to the proposition that real improvements in the standards of our people as a whole can come about only by increasing our efficiency and productivity—in other words, by increasing our output per unit of the resources at our disposal. And, insofar as I am able to understand them, our commonly used measuring sticks are particularly ill adapted to arrive at meaningful conclusions as to the productivity progress in professional and service fields such as health and medical care. But one thing seems clear—to the extent that our health and medical programs do not increase their own efficiency, they can progress only at the expense of other needs and wants of our people.

The final consideration I would like to mention is this: There is a definite management self-interest in the continuing good health of employees. We know that proper care in the event of illness or accident can insure an earlier return to work, and can be a major factor in the efficient operation of the company. We know that a major share of absenteeism is caused by off-the-job illness and acci-

dents. We have to schedule for it, make allowances for it, transfer employes to unfamiliar jobs with resultant loss of efficiency. Moreover, as management problems and industrial processes become more complex, we become increasingly dependent upon highly-skilled people. The absence of just a few key people can be very costly to us. In our own self-interest it is important that our employes be healthy and productive.

At the same time, it must be acknowledged that to date no one, so far as I know, has come up with a satisfactory price tag on factors such as these which would enable management to determine the dimensions of cost expenditures for medical benefits which actually are recouped through such factors. It is doubtful, in my opinion, that the nature of the situation is such that reasonably precise calculations of this kind are possible.

Now, all of these considerations that I have discussed are not always easy for mere fallible humans—which managers, after all, are—to bring into a proper balance when deciding upon specific proposals for management policies and actions; but decisions nevertheless must be made.

MANAGEMENT'S ROLE

I would like to discuss, in the time remaining, some conclusions to which these considerations have led us in the company I represent.

First, let's consider our role as an industrial citizen of the community, concerned with the support of community health agencies and facilities.

As a major employer, we must dispose of requests for direct contributions to innumerable voluntary agencies in this field, and to requests that we permit, undertake, administer or otherwise support appeals to our employes for contributions to such agencies.

There seems to be no natural limit to the number of groups which can form themselves for apparently worthy purposes and undertake fund drives. For the individual employer to pick and choose intelligently without risking ill-feeling, charges of favoritism and discrimination, and wasteful or unwise use of donated funds is a virtually impossible task.

As a step toward solution of these and related problems, we endorsed the United Fund approach at its inception, and took an active part in its development.

As you probably know, ten years ago Detroit pioneered the United Foundation, and after ten years' experience we are absolutely sold on it. Year after year, it has proved to be the simplest, most convenient and most economical way of doing the job for which it was designed.

We were active in developing a comparable approach to the raising of capital funds for com-

munity facilities—chiefly hospitals.

But, as we see it, the greatest selling feature of federated giving from this time onward will not be mere convenience. It will be the evidence that federation gives of thorough planning which enables it to provide all the health services a community should provide. Federation has moved beyond the stage of initial enthusiasm. It now has adult responsibilities. It will continue to enjoy success only insofar as it measures up to these responsibilities. It will maintain its place only as it proves itself capable of keeping up with the changes that affect community health services, and of serving the community well. If it is to continue its early success, it must be ready to adopt new attitudes, new disciplines and new habits of thought about community services. Above all, it must plan programs with all the care it can muster.

And here, of course, the problem of rising medical costs confronts us head-on. We see this economic problem as one of the gravest difficulties lying ahead for federation. If we are to continue our voluntary United way of handling community health problems, then we must prepare for a possible doubling of the cost of health services in the next ten years. And unless we demonstrate our ability to cope with rising costs in such a way that the community's health needs are adequately served, and for adjusting community programs to changing community patterns, then federation as we know it seems doomed.

Our voluntary community health services, including our voluntary community hospitals, have throughout our nation's history provided us with a way of dealing with our health needs that is consistent with our democratic and free enterprise society. This tradition of self-help through the neighborly sharing of our common responsibilities is part of our way of doing things. It is the medium through which the employer can best meet his responsibilities in this area as an industrial citizen of the community. It gives him the opportunity to contribute to the group effort, not only his money, but the specialized talents and knowledge that experienced business management can contribute toward realistic planning and administration, the avoidance of waste, and the necessity of living within the means available. And at the same time it preserves to the professionals and experts in the field of health and medical care primary responsibility for the design and execution of their programs, and provides a mechanism for resolving the often competing claims of the various interests which make up the community.

In our capacity as a "consumer" of medical services through contributions toward the cost of selected hospital-medical care benefits for our employes, we are not over in a separate compartment

completely walled off from that labeled "community citizenship." On the contrary, in the consideration of such programs we have kept very much in mind their relationship to and impact on the community.

Thus we have opposed the notion of special facilities and medical programs designed for the exclusive use of our own employes or the employes represented by a particular union or group of unions.

MICHIGAN STANDARD

Our principal employe coverage for basic hospital-surgical protection is through Blue Cross-Blue Shield plans. Our employes are enrolled under more than 40 of these local Blue Cross-Blue Shield plans.

We attempt to select from the coverages available at each location that which provides the most nearly uniform protection for all our employes. Our standard is the Michigan Blue Cross Comprehensive Plan and Michigan Blue Shield's M-75 program.

Since Blue Cross-Blue Shield plans are local organizations, the plans which they develop are designed to meet local needs and are influenced by local considerations. In many instances, local Blue Cross-Blue Shield organizations, especially Blue Shield, have not offered plans as comprehensive as Michigan Blue Cross-Blue Shield.

About 70 per cent of our hourly employes now have coverage that is equal to or close to the Michigan standard. It is not our policy to pressure local Blue Cross-Blue Shield organizations to devise plans that are facsimiles of Michigan Blue Cross-Blue Shield. We recognize that local conditions differ. However, through Michigan Blue Cross-Blue Shield which is our Host plan, we do let other Blue Cross-Blue Shield plans know that we are ready to accept coverage that is consistent with the levels set forth in our bargaining agreement wherever such plans are made available *to the community as a whole*. We firmly believe that any attempt to secure an exclusively Ford contract could result in an undermining of the community approach.

Consistently with the considerations discussed earlier, these coverages are offered employes on a voluntary and contributory basis. Over 90 per cent of our employes have elected to participate in them.

The costs, to both company and employes, have risen steadily ever since we adopted such plans, and promise to continue to do so. The increases are attributable in part to improvements in the coverages themselves, and in part to the increased costs of providing the services covered. These costs have become a very considerable item in the total labor

costs that must be reflected and recovered in the prices of our products.

The increasing cost of providing the covered services gives us particular concern because it is largely beyond our own control.

We could, to be sure, achieve better control of our own costs by going to indemnity-type plans. But, so far, we are not convinced that, in this field, indemnity plans give as good *value* for the money expended as do prepayment service-type hospital and surgical plans. This, coupled with our interest in community programs, has influenced us against embracing the indemnity route to date.

It has been charged that our present system, and, in particular, the service-type prepayment plans, furnish insufficient incentives for reasonable cost controls. We do not subscribe to this. If nothing else, the ever-present pressure for socialization of hospital and medical practice and care should provide incentive enough.

Keeping hospital and medical care costs under effective control should be the constant goal of hospital administrators and the medical profession. Theirs is the primary responsibility, and theirs is the competency to do so without sacrifice of medical standards and the traditional ethics and freedoms of their callings. As customers interested in value received, employers have a responsibility to see that the consumers' needs and interests are accorded real weight. As citizens, businessmen have the responsibility to see that they support only programs that merit their support, and to contribute such advice and know-how as falls within their special competency. But, ultimately, the job can be done only from inside.

At the point where we are negotiating with unions concerning our employe insurance programs, we are fully conscious of the impact that our decisions and actions could have on medical and hospital practice. Because we are aware of this potential impact, however, we have been especially careful to give weight to all of the various considerations I have mentioned in developing the positions we take and the propositions we make in collective bargaining.

The fact is, we and our major union, the UAW, have, simultaneously, a certain common interest and what appear to me to be some distinct differences in ideology and approach when we bargain on these matters.

We have in common, of course, an interest in selecting good insurance or prepayment arrangements at good values for our employes.

WHERE WE DIFFER

I think we differ, however, on the role that collective bargaining should play in shaping hospital

and medical practice as such, and in solving broad community problems. The UAW quite regularly seeks, through bargaining pressure, to force our aid in implementing its social or community objectives. We, on the other hand, have a deep conviction that the collective bargaining arena, designed to resolve labor-management differences over conditions of employment, is one of the most ill-fitted places conceivable for resolving these other kinds of problems. If they were to be permitted to become entangled in the considerations for maintaining labor peace in our plants, it would be bad—both for us and the community.

There is another difference, I think, which runs much deeper. It has to do with our respective attitudes toward the proper role of government, the responsibility of the individual, and the values in our free institutions and traditions. Thus we part company with the UAW with respect to its attitude

toward our existing systems and institutions for providing care. We know they can stand improvement, like most other things in this world, but we do not view them as anti-social. And we disassociate ourselves completely from what frequently appears to us to be its war against the medical societies.

To conclude, I have faith in voluntary programs and the ability of the professions and community organizations involved to fulfill the needs of our people.

I am encouraged in this faith by the increasingly abundant evidence that our doctors, our hospitals and our voluntary community organizations are conscious of the problems, aware of their responsibilities and actively seeking better ways and means of meeting them. Given this awareness and attitude, I feel confident that they will be met within the framework of our free institutions.

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OF

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*Pratt, R. T. C., and McKenzie, W.: Anxiety States Following Vestibular Disorders, *Lancet* 2:347 (Aug. 16) 1958.

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Around The State

Hartford County

The Hartford Heart Association is now proposing that a Cardiac Work Evaluation Unit be set up for the Hartford Community, it was learned this month.

Apparently Hartford was chosen because of its location as a state capitol, its centrality, the main offices of state departments are located here, and the city offers a broad variety of employment.

The unit will be comprised of a medical director and a panel of internists with cardiology interests, vocational counselors, clinical psychologists and social workers, all part time. They will be paid for their services by the Hartford Heart Association.

John Donnelly has just returned from a trip to England where he studied the facilities for the mentally ill. He attended hospitals in London along with the commissioner of mental health, Dr. Wildfred Bloomberg and the four superintendents of Connecticut's state mental hospitals. They made studies of England's "opening hospital."

Re-elected president of the New Britain Branch of the American Cancer Society recently was William T. Livingston. Named to serve on the executive committee were: George Bray and Samuel Johnson and George Gura of Southington. Elected a trustee was Thomas Madden.

Paul D. Rosahn, pathologist at the New Britain General Hospital has been granted a leave of absence for one year. Simultaneously, the China Medical Board of New York has announced the appointment of Dr. Rosahn as Visiting Professor of Pathology at the University of Medical Sciences in Bangkok, Thailand.

During his absence the department of pathology will be directed by Thomas Madden.

Returning from Russia recently was Joseph Kaschmann. He had a first hand glimpse of the Leningrad Hospital where he was a patient for four days.

Appointed as interim member of HCMA's Committee on Third Party Payments was Charles Polivy.

Reginald Edson recently participated in the AMA's Boston conference on aging.

William Neidlinger, and Amos Friend will participate in the annual meeting program of the American Rhinologic Society to be held in Chicago.

New Haven County

The Board of Governors met September 9th. Besides transacting routine business several matters of lively current interest were discussed. Max Caplan, Luca Celentano and others described the good work of county physicians in staffing polio inoculation clinics. Doctors' services are given without remuneration, a fact which does not always receive due recognition in newspaper write-ups and official publicity releases. (The fees earned by physicians at the clinics have been donated to the Educational Foundation of the American Medical Association). A motion was passed by the Board of Governors commending physicians who have given their services in these inoculation campaigns.

Henry Caplan reported on behalf of the committee now working on arrangements for a full time Executive Secretary for the County Association. Larger quarters have been made available at the New Haven Medical Association's building on Whitney Avenue, and the Board of Governors authorized Dr. Caplan's committee to proceed with plans to secure suitable furnishings. Mrs. Marie Bolognese will act as temporary executive secretary while the committee screens the large number of applications which have been received for the regular post. Following completion of screening the names of the most suitable applicants are to be submitted for further consideration to the Board of Governors.

Israel E. Blodinger gave a report on current relations between the Council of the State Medical Society and Connecticut Medical Service. The councilor advised the County Association to change the by-laws covering reinstatement of members dropped for non-payment of State Society dues to conform with AMA policy. This matter will probably be brought up for discussion at the regular October meeting of the Association.

In Memoriam

Kaufman, Charles M.—New London; Jefferson Medical College, 1919; former chief of surgical staff at Lawrence Memorial Hospital, New London; retired from surgical practice in 1946 because of illness; was medical examiner for New London; he was admitted to the hospital August 4 for treatment of a head injury incurred when he fell at his home; died August 8 as a result of a fractured skull, aged 64.

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Daniel B. Corwin, M.D. announces the removal of his office for the practice of general medicine and surgery, from 463 West Avenue to 49 East Avenue, Norwalk.

Thomas P. Crotty, M.D. announces the opening of an office for the practice of internal medicine at 1107 New Britain Avenue, West Hartford.

Thomas F. Fogarty, M.D. announces the opening of an office for the practice of internal medicine at 2952 Main Street, Bridgeport.

Stanley E. Goodman, M.D. announces the opening of an office for the practice of general surgery at 160 East Avenue, Norwalk.

Herbert L. Kraut, M.D. announces the opening of an office for the practice of dermatology at 1741 Summer Street, Stamford.

William F. Neth, M.D. announces the opening of an office for the practice of pediatrics at the Trumbull Center Professional Building, Trumbull.

Henry C. Rogers, M.D. announces the opening of an office for the practice of general medicine at 720 Hopmeadow Street, Simsbury.

Carl P. Viola, M.D. announces the reopening of an office for the practice of medicine at 26 Cherry Street, Milford.

Philip B. Wade, M.D. announces the opening of an office for the practice of chest and heart surgery at 302 State Street, New London.



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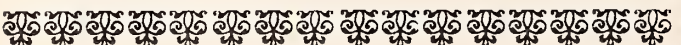
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Book Reviews

"501 QUESTIONS AND ANSWERS IN ANATOMY." By Stanley D. Miroyiannis, Ph.D., Published by Vantage Press, Inc. May 1959. 250 pp.

Reviewed by DENIS S. O'CONNOR

As might be inferred from the title, this is a review book for one who has had a formal course in anatomy but who is faced with the necessity of facing examination wherein he is obliged to give fairly accurate answers to questions which only those who seek to rate his knowledge of the subject can devise.

More than two hundred and fifty pages are devoted to questions requiring description, divisions, definitions or relations. The rest of the book calls for matching words, filling in missing words, or answering "true or false."

The details called for in answer to the questions propounded doubtless are known to anyone who has had an adequate course in anatomy but unless one had studied the subject as approached by this book, he would find it difficult to make a good record on examination.

This book could also be of service to the surgeon to refresh his memory concerning the relations of organs at a specific operation or to the traumatic surgeon faced with a severely mangled extremity.

The medical witness about to appear in court could well fortify himself against hostile cross examination with the aid of this book and the trial lawyer with the aid of this book could make the position of an uncooperative witness very uncomfortable.

For one who wishes to review his anatomy in a very practical way this book is highly recommended.

SURGERY OF THE FOOT. By Henri L. DuVries, M.D. The C. V. Mosby Co., St. Louis. 494 pp. \$12.50.

Reviewed by IRA S. GOLDENBERG

Man's erect posture makes the foot a most important functional structure. Almost no other portion of his anatomy is subject to so many abuses. As a result the ills which may befall the foot are many and varied and involve many medical disciplines. After a lifetime of study of the foot, Dr. DuVries has set down the first truly complete analysis of the normal and disease states which may involve the foot.

Diagnostic measures, physiopathological analysis and therapeutic endeavor both operative and nonsurgical are described completely and succinctly. Excellent line drawings and well reproduced roentgenograms accent the discussion and sharply clarify technical points. The author's many years of experience make this book especially meaningful to the general practitioner, orthopedic surgeon and the pediatrician as well as the general surgeon. The dermatologist and the internist can also benefit by the complete analysis of management of many problems of the foot which come to their attention. This book is a magnificent reference volume and should be in the library of all physicians who treat any foot disorders.

CIBA FOUNDATION COLLOQUIA ON AGEING, VOL. 4.

Water and Electrolyte Metabolism in Relation to Age and Sex. Little, Brown & Co. 327 pp. \$8.50.

Reviewed by W. W. WINTERNITZ

This is the fourth in a series of colloquia on ageing held by the Ciba Foundation, a non-profit international scientific center operated in London by an independent board of trustees. This collection consists of eighteen separate papers by prominent English, American, and European investigators.

Approximately a third of the papers have no special relationship to the problem of age and/or sex as might be expected since this represents a somewhat artificial division of the general field of water and electrolyte metabolism.

The papers and the lengthy discussions are in general of high quality and of great interest to physicians and physiologists in the field of electrolyte and water metabolism.

Some of the outstanding discussions are:

Dawson on cellular aspects of electrolytes and water;

Fourman's paper on hypo- and hyper-natremia;

Parker on body compartments and age;

Shock and Kennedy on the ageing kidney;

Fejar on electrolytes in congestive failure;

Card's description of perhaps the first well documented human case of magnesium deficiency.

This is a collection of experimental observations and discussions by persons who are on the frontiers of research and in general it will be of interest to the specialist in the field of electrolyte metabolism rather than to the average physician.

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SEMI-ANNUAL MEETING

October 20, 1959

Gallo's Terraces

Berlin, Conn.

The semi-annual meeting of the Woman's Auxiliary to the Connecticut State Medical Society will be held on Tuesday, October 20, 1959 at Gallo's Terraces in Berlin, Conn. Registration starts at 10:30 A.M. with the business meeting immediately following. The luncheon will cost \$3.00 tax and tip included.

The program committee promises a most interesting speaker for this meeting and as an added feature for the members a style show of the new fall fashions will take place during the luncheon. **PLAN NOW TO ATTEND!**

Reservations for this meeting should be mailed to:

Mrs. Willard E. Buckley
Ballfall Road
Middletown, Conn.

Gallo's Terraces is located next to the Connecticut Light and Power Co. in Berlin—3430 Berlin Turnpike, Newington, U.S. Route 5, Connecticut Route 15.

Mail reservations before October 14, please!

Fall Conference

The 1959 Conference of the Woman's Auxiliary to the American Medical Association will be held at the Drake Hotel in Chicago, Illinois, October 5-7.

The theme for the conference is "Opportunities for Service to the Community." Mrs. William Mackersie, national president-elect will be the presiding officer of the conference.

Monday's program will feature a two-act play "Ladies in the Lobby" portraying the Washington scene and moderated by Mr. C. Joseph Stetler, Director, Law Division, A.M.A.; a membership sales promotion meeting with Mrs. Charles L. Goodhand as sales manager; The Bulletin; American Medical Education Foundation; a procedures discussion; "Your Central Office"; and a get acquainted hour.

Tuesday will open with regional membership breakfasts followed by a discussion of community service implementation; recruitment; civil defense and a general discussion in the round by all the attendants of the conference.

Wednesday morning a film "Medicine as a Career" will be shown, after which Dr. Ernest B. Howard will give the "A.M.A. Roundup" and then he will moderate a clinic for Auxiliary problems. The conference will close at noon.

Connecticut will be represented by our president, Mrs. Walter Nelson, and our President-elect, Mrs. Morton Arnold. Mrs. F. Erwin Tracy, national chairman of Bulletin circulation will attend and present the program on that phase of work. Mrs. Paul W. Tisher, Eastern regional chairman of Bulletin Circulation will also attend. Full reports of this meeting as well as pertinent facts from the annual Auxiliary meeting in Atlantic City last June will be presented to the membership of the state at the semi-annual meeting on October 20.

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NEW BRITAIN

GUILDCRAFT OPTICIANS

A Medical Evaluation of the Forand Bill, HR 4700 86th Congress

IT is to be devoutly hoped that in the few short months remaining between now and next Spring, each physician in Connecticut will take the time and trouble to acquaint himself with the purpose, the proposal, the cost and the restrictions of the legislative measure which is currently known as the Forand Bill, HR 4700, 86th Congress.

It is to be further hoped that having acquainted himself with these facts, he will exercise his duty as a citizen to inform his colleagues, his patients, his hospital directors, his friends and particularly, his representatives in Congress as to how he evaluates this bill as a piece of so-called "medical" legislation. As the provisions of HR 4700 are studied by doctors, it may well become apparent to them that this is not really a medical bill at all but, rather, a social and welfare measure which is designed to offer health care services to OASDI beneficiaries instead of only monthly cash payments as at present.

THE PURPOSE

The avowed purpose of the Forand Bill is to call upon the federal government to finance the "health care" needs of that group of some 15,000,000 American people who have only recently been categorized variously as "the aged," "the aging" and as "our senior citizens." As a matter of fact, only 9,300,000 people receive Social Security payments. This means that at least 6,000,000 people over 65 would not be eligible for Forand "benefits." The leaders in establishing these categories and those who are the strongest proponents of HR 4700 come largely from the ranks of the professional unionists, the professional welfare workers and such professional public servants as are indebted to the first two groups for political support. Their joint concern of the moment for the health of older people might have a much truer ring if it were not for the fact that most of these professionals openly admit that their ultimate goal is compulsory national health insurance for everyone—the forerunner of national socialism.

THE PROPOSAL

The basic proposal of the Forand Bill is to amend the Social Security Act and the Internal Revenue Code so as to provide 60 days hospital care, 120 days nursing home care and certain limited surgical and dental procedures for persons eligible for Old-age, Survivors and Dependents' Insurance benefits. These services would be provided for any person who is entitled to retirement benefits (age 62-65); a

dependent of a person eligible for retirement benefits; a dependent of an individual entitled to disability benefits (but not the disabled himself); and certain survivors of OASDI beneficiaries.

FINANCING

The benefits provided for in this bill would be financed by further progressive increases in the Social Security tax rate, above and beyond those already planned for the period 1960-69. At the start, these increases in taxation would be levied against the prevailing "wage base" which is \$4,800. It should be kept in mind, however, that this wage base was increased only this year from \$4,200 to \$4,800, and that in the relatively near future, it may be increased up to \$6,000 *for retirement benefits only*. The latter plan has already received the endorsement of many prominent labor leaders—and even a few industrialists—who foresee in it a chance to cut off employee pension responsibility by transferring it to the government.

COST

In evaluating the costs of proposed programs, the government is usually rather optimistic in its outlook and tends to underestimate them. Even so, a conservative estimate of the cost of fulfilling the provisions contained in the Forand Bill is about \$2,000,000,000 for the first two years, and many people with more medical than political knowledge figure it would be closer to \$4,000,000,000. These, of course, are estimated costs of the operation for the first two years *only*. Thereafter, with millions of additional beneficiaries being added to the rolls and taking into account the experience of Great Britain in this method of providing health care, it is only logical to suppose that the annual cost of a Forand-type program would triple or quadruple within the next ten years or so. When it is recalled that in the year 1957-58, the total health care bill of the nation came to "only" \$15,000,000,000, it is indeed discouraging to contemplate a yearly expenditure of perhaps \$8-10,000,000,000 to meet the medical care needs of *the aging alone*—and only part of them, at that.

RESTRICTIONS

While containing clauses which purport to prohibit supervision or control over the practice of medicine or the administration and operation of hospitals or nursing homes, the bill allows "free choice" of hospital or nursing home *only* if such in-

stitutions have entered into agreements with the government to provide services under the bill.

The bill allows "free choice" of surgeon, *only* if such surgeon is certified by a recognized board of surgery, is a fellow of the American College of Surgery or is on the surgical staff of a hospital accredited by the Joint Commission on the Accreditation of Hospitals. The "surgical services" allowable *must be performed in an approved hospital*. Surgery outside any hospital is not provided for in the bill.

It is a foregone conclusion that many serious administrative conflicts would arise in instances where a duly authorized surgeon wished to render authorized care to his patient in an *unauthorized* institution or vice versa. As in all such plans, the illusion of free choice is preserved by ruling that in an emergency, *any* doctor could render services to a card-carrying beneficiary in *any* institution, it being implicitly understood that compensation to the participants in such care would be made at the going government rates.

The bill would not permit elective surgery of any kind. In the Forand measure, "The term 'elective surgery' means surgery that is requested by the patient, but which in the opinion of cognizant medical authority is not medically *required*." This is, indeed, a strange definition of elective surgery. A great deal of medical care may be recommended in the interests of the patient's present and future health. How much of it is actually "required" might become a very debatable and controversial point.

Non-surgical physicians' services are, of course, not provided for at all.

QUESTIONS AND ANSWERS

Unfortunately, most doctors do not have the time or the background information which would enable them to answer questions on the Forand Bill, involving sociology, economics, statistics, labor-management policies, etc. As a result, even though they are firm in their conviction that all government-controlled medicine is "bad" medicine and that the American people don't want it any more than they do, they are often at a loss to provide answers to a number of questions which the profession is being asked by non-medical inquirers. Some of these questions are politically inspired, are purposefully tricky and, in fact, are part of a concerted effort to toss all the problems of our aging population into the laps of those who provided medical care. The following examples are for your information concerning this most important legislative measure. Always remember one thing—you may not know much about politics, unionism or welfare work, but most of your questioners know even less about medical care.

QUESTION: Mr. Forand has said that he is not "wedded" to his bill, and a number of labor leaders

have said that if doctors don't like this plan, they should come up with a better one. Why doesn't the medical profession introduce legislation of its own which would provide for the health needs of the aging?

ANSWER: This standing invitation to remedy the economic plight of the needy aging is a clever trap set for the physicians of America by the social planners. Short of introducing protective and retaliatory legislation which would call for the total destruction of the free enterprise system, organized medicine cannot offer substitutes for the Forand Bill without confessing to a sin it has not committed—bringing about inflation and therefore being responsible for the money problems of all people with meager resources.

QUESTION: Assuming that a large number of our senior citizens are able to purchase their own health insurance, you cannot simply ignore the health needs of a substantial minority of our older people who can hardly afford food, clothing and shelter—let alone pay their medical bills. What does the medical profession propose to do for these folks—the indigent—who are certainly entitled to feel independent and who definitely don't want to have to accept charity?

ANSWER: Indigency is a total economic status. It is no more related to the purchase of health insurance than it is to paying for shelter, food or clothing. The proponents of Forand-type legislation always list these necessities of the aged in such order as to put "medical care" last, thus creating the desired illusion that it is *only* medical needs which cannot be met.

If some people over 65 have no resources beyond Social Security benefits (which average only \$64.58 a month nationally), in these inflated times it is no wonder that they are indigent with respect to practically all of life's necessities. Adding on the few supposed benefits offered under the Forand Bill will in no way alter their indigency nor will it make them any less dependent on the rest of Society nor free from the necessity of accepting charity.

QUESTION: If it is true, as some say, that the economic plight of the aging could be largely remedied by providing them with "free" medical care, why are doctors, dentists and hospital people opposed to the Forand Bill?

ANSWER: The present economic plight of most individuals with limited income and resources has been brought about by inflation—contributed to by excessive labor demands, management acquiescence and the irrational "tax-and-spend" policies of the government itself. If, as they have always done, doctors continue to make *no* charge for their services to the needy and if the hospital bills of the indigent continue to be paid by local welfare and charitable agencies, all the other economic prob-

lems of these people will remain unaltered. What they really need is more money—obtained through prolonged employment, better financial planning for their inflated retirement years, etc.—*not* socialized medical care, which is anything but “free”!

QUESTION: Admitting that the voluntary health insurance movement has made great strides in providing adequate health coverage to the American people, can the average older retired person afford to buy these plans?

ANSWER: The “average older retired person” can afford health insurance. Almost 60 per cent of OASDI beneficiaries have a net worth of \$3,000 or more; over 50 per cent, a net worth of at least \$5,000; and 33 per cent have a net worth of \$10,000 and up. Nearly 75 per cent own their dwellings, and it should be assumed that the majority have responsible families.

The premium for a first-rate, individual, voluntary health insurance program is not over \$100 a year. Under the Forand Bill (divide 9,000,000 beneficiaries into \$2,000,000,000 probable initial annual cost), the per capita cost for the very limited coverage provided would be \$225 a year.

It appears, then, that the *average* retired person can afford a good voluntary plan, but it is doubtful that the *informed* productive wage earner would be willing or able to pay over \$200 a head to provide very limited health care for only the small fraction of senior citizens who cannot buy their own coverage.

QUESTION: Let's face it, doctor, there are already 15,000,000 people over 65 years of age in America today and it is expected that, by 1975, there will be 20,000,000. Everyone admits that you medical people have done a good job in adding years to the lives of these folks, but why do you now want to deny them the medical benefits of the Forand Bill, which would let them all enjoy continued good health, and financial security against illness, during these added years?

ANSWER: Out of the 15,000,000 people over 65, only 9,000,000 receive Social Security benefits. Even counting those who would qualify for other reasons, *well over one-third (5,000,000) would not be entitled to Forand Bill coverage at all.* Further, costing at least \$2,000,000,000 for the first two years, the so-called “medical benefits” proposed by the Forand Bill, are very limited in scope. Only about one-third of all physicians' services are surgical in nature and, since HR 4700 allows *no elective surgery*, less than 25 per cent of beneficiaries' “doctor care” needs would be met through this legislative measure. No non-surgical benefits are allowable. The cost of the program is great—the actual “insurance” value is small and totally inadequate.

QUESTION: Don't you agree, doctor, that since all the beneficiaries of Social Security have contrib-

uted to the program over a whole lifetime of work, these people have earned *the right* to receive not only cash benefits but also some assurance that their medical needs will be met when they retire?

ANSWER: No! In the first place, no person in America today has contributed to Social Security for “a lifetime of work.” Few, if any, people work regularly until after the age of 18 and, in any event, since Social Security did not come into existence until 1937, no one now receiving benefits could have worked regularly more than 22 years, which is hardly “a lifetime.” As a matter of fact, many, many beneficiaries have received tens of thousands of dollars to date whereas they contributed only a very few dollars to the plan during their working years. Not one of these people contributed a cent toward the meager increase in benefits just recently handed out through the mechanism of increasing the tax on those still employed. And not one of the people who would be “entitled” to the supposed benefits of the Forand Bill for years to come would have paid anything toward financing the program. These are the facts and this is the “right” to which some of our prominent labor leaders refer. This is what puts the socialism in Social Security.

Yet, even though we have grown to accept OASDI as a thing of some merit, the best that can be presently given to beneficiaries of this scheme as their “right” is a national average of \$64.58 a month—and less than 50-cent dollars, at that.

QUESTION: We notice that you medical people keep taking pot shots at the Social Security system yet we understand that a sizeable number of physicians seem to want to be covered by the plan. If a good many doctors approve of Social Security for themselves, what is basically wrong with it as a means for people to provide for their retirement years? How should it be altered?

ANSWER: When any pie is being cut, it is only human nature to want to be at the table to get a piece. Many doctors have adopted the philosophy that “if everybody else is getting it, why shouldn't I?”, but in their own minds, they know the plan is but another manifestation of deficit spending by the government and that, particularly in inflationary times such as these, it isn't doing the job it is supposed to do and probably couldn't even if every wage earner put in half of his pay every week. \$1,000 a year, more or less, just isn't enough to get along on, if a senior citizen never had a sick day in his life. The concept of adding on the tax burden of financing a so-called “medical care” plan such as the Forand Bill calls for, thereby compounding the felony, would be laughable if it were not for the fact that some people take it so seriously and are working so hard to make it the law of the land.

How to alter the Social Security program? First let's do away with compulsory retirement at *any*

given age. This is medically not necessary and, indeed, is psychologically unwise. Second, let's take off the allowable income ceiling of \$1,200 and let people get their Social Security pension at 65 if they are entitled to it—if indeed they really have any equity as a result of their contributions. Third, and last, let's stop the practice of denying people the right to work after a certain age and of trying to make them faceless members of society who, as planned by the advocates of the welfare state, are creating the very problems which the Forand Bill so ineffectively and unrealistically tries to meet.

QUESTION: You doctors are always warning the public about the dangers of "socialized" medicine. Isn't it true that government-controlled health care is working out pretty well in England?

ANSWER: It is true that there are conflicting reports coming from Great Britain as to the success or failure of the National Health Service. The reaction to it by both doctors and patients seems to vary somewhat. But a few facts about the system are uncontested and reflect the inherent dangers of "free" health care—of socialized medicine.

1) The cost is fantastic, having increased more than six fold since its inception (1948). This is not its cost *to the government*; it is the cost *to the people*, via taxation. While English retail prices have risen only 41 per cent, the cost of this compulsory medical care program has increased over 300 per cent. It now uses up over 10 per cent of the British annual budget.

2) Despite this tremendous increase in cost, almost all services have had to be seriously curtailed. Over-utilization, inefficiency and waste always accompany "give-away" programs. Anything represented as being "free" encourages abuses—and is abused. Doctors receive no credit for trying to police the plan—only criticism (they may even be *fin*ed for making an unpopular medical decision). Most of them have succumbed to the endless red tape.

3) Hospital building and modernization have long since come to a standstill. There's no money for that. Over 500,000 people regularly wait six to eight months for admission because the beds are occupied "without charge" by those who got there first and choose to stay there.

4) For a physician, the largest panel of patients is the most lucrative. The number of hours in the day divided by the number of people to be seen equals the length of each visit—not the degree of need for medical attention. In Poland, (also socialized), the rate required by government is 6 patients an hour.

5) As a total effect, the incentive of quality students to embark on careers in medicine is fast being lost. The impact of this destruction of initiative will not be felt fully for another decade or so but when it eventually occurs, the results will undoubtedly prove disastrous to the British people.

QUESTION: Aren't you physicians really more concerned about your pocketbooks—about losing money—than you are about the quality of American medical care?

ANSWER: Of course doctors have a vested interest in preserving free enterprise in medicine. No intelligent person would willingly devote twelve or fifteen costly years in preparation for a medical career if he knew, in advance, that his reward was to be a life of drudgery as an underpaid, government-employed hack. This is true for all professional and business ventures.

But of one thing we can be sure! If the tragedy of government-controlled medicine ever strikes our country, the doctors of America can live with it a whole lot better than their patients. True, the medical man would lose money and pride in his work, but the public would lose much more—the highest quality of medical care in the world today. The one could perhaps afford the loss, but can the other?

QUESTION: Don't you think "free" medical care would be good *just* for people over 65, if it stopped there and didn't go any further as proposed by the Forand Bill?

ANSWER: Absolutely not. The only "free" aspects of medical care that are desirable are the freedom of every patient to choose his own doctor, hospital and health insurance program, and the freedom of each physician to prescribe for his patients the treatment he believes necessary—unfettered by government regulations, "allowable" medications and "non-elective" surgical treatments.

Ours is a system under which American medicine has come to be the best in the world. We simply cannot allow it to be destroyed to bring alleged benefits to a very small segment of our population which, in any event, is receiving good medical care *right now*—and irrespective of ability to pay for it.

Those who are planning this destruction, and who seek to start the ball rolling through Forand-type legislation, have publicly declared that they will not stop when they have achieved a "little socialized medicine" but will go on, step by step, until compulsory national health insurance for all has become a reality. Then they can look for new business and professional fields to conquer.

MARTIN I. GOLDENBERG, M.S. AND MARGRÊT GUDNADÓTTIR, M.D.
New Haven

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and their families, young adults and children under 10 years of age.

The survey involved 120 (88 per cent) of the families, the total number of persons surveyed being 345. The ages of the persons studied are shown in Table 1. There were 105 children, with an average age slightly under two years. The average age of the 240 adults was just over 26 years.

Illness Survey Procedure

The study was initiated on 26 August and terminated on 16 November 1958. The investigation was divided into two parts, consisting first, of an illness survey of the entire population, and second, of laboratory tests for the isolation and identification of viruses present in the stools of certain sick individuals.

The illness survey was accomplished by a personal visit to each family. Questionnaires were provided which were designed to give information on any recent illness in any family member. The persons receiving the questionnaire were asked to fill it out completely with respect to the names and ages of all residents of their households, and to check any symptoms present in any members of their families in the weeks just passed. Three months later a second questionnaire was distributed and treated in an identical manner, except that the participants were asked to note only those illnesses which had occurred subsequent to the first survey.

Collection and Testing of Fecal Specimens

Fecal specimens were collected from seven persons who became ill. These were tested by the method usually used in this laboratory;²¹ i.e., a 10 per cent suspension of each stool was made in sterile distilled water, placed on a rotary shaker for one hour, and centrifuged in the cold for one hour. The supernatant fluid was poured into a sterile tube, and to this a mixture of penicillin and streptomycin was added. The contents of the tube were frozen at -20° C until tested. Each specimen was inoculated in one ml amounts into each of two rhesus monkey kidney monolayer tissue culture bottles.²² Cultures showing the cytopathogenic effects characteristic of enteroviruses were typed by means of neutralization tests with immune sera.

RESULTS

The Community Survey

From the survey of 345 individuals it was determined that during the period from 1 August to 1 November, 49 members of the group had been ill with symptoms which might have been due to an enterovirus infection. The signs and symptoms were influenced by the age of the individual. The cardinal sign in children was an exanthem. In adults, the disease was most often characterized by

meningeal symptoms—occipital headache and/or stiff neck. However, none was sick enough to require hospitalization and no lumbar punctures were done. Other symptoms, such as fever, anorexia, and gastro-intestinal disturbances, were common to both groups. One Echo-9 virus-positive adult, age 25, had a slight sore throat as her only complaint.

Table 2 shows the prevalence of signs and symptoms in the two age groups. Of the 105 children in the survey, 23 (22 per cent) were recorded as having symptoms suggestive of enterovirus infection. Of these 23, 18 (78 per cent) had a rash. Twenty-six (11 per cent) of the 240 adults were ill, but only one (four per cent) had a rash. A stool sample taken from this one adult yielded Echo 9 virus. The age-distribution of rash due to Echo 9 virus shown here is similar to that found by other investigators.²³

TABLE 2
SIGNS AND SYMPTOMS IN CHILDREN AND ADULTS

SIGNS AND SYMPTOMS	NUMBER AND PER CENT OF 105 CHILDREN REPORTING	NUMBER AND PER CENT OF 240 ADULTS REPORTING
Total reporting illness	23 (22%)	26 (11%)
Fever	21 (91%)	15 (58%)
Rash	18 (78%)	1 (4%)
Headache	4 (17%)	20 (77%)
Stiff neck	3 (13%)	8 (31%)
Sore throat	3 (13%)	11 (42%)
Anorexia or nausea	8 (35%)	12 (46%)
Vomiting	6 (26%)	3 (12%)
Diarrhea or constipation	9 (39%)	8 (31%)

The age-specific incidence of cases and the occurrence of rash is shown in Table 3. The highest attack rate (23.38 per cent) was in the age group seven months to two years.

TABLE 3
AGE-DISTRIBUTION OF RASH

AGE	NUMBER	NUMBER ILL (%)	NUMBER WITH RASH
0- 6 mo.	24	1 (4%)	1/1
7-12 mo.	13	3 (23%)	2/3
1 year	21	8 (38%)	6/8
2	23	6 (26%)	6/6
3	11	2 (18%)	2/2
4	9	2 (22%)	0/2
5	1	0 (0%)	.....
6	1	1 (100%)	1/1
7	1	0 (0%)	.....
8	0	..	.....
9	0	..	.....
10	1	0 (0%)	.....
Total			
children:	105	23 (22%)	18/23
Adults			
> 19 yrs.:	240	26 (11%)	1/26

The data obtained were not precise enough to give information as to the length of time all of the above-named signs and symptoms persisted in each case. The duration of only one of these—fever—could be determined from the questionnaires. In both adults and children, the average duration of the fever was approximately three days. Fever was recorded as “moderate” or “mild” in some adults and children, while one child had a temperature of 105.6° for two days.

It was possible to ascertain the date of onset of symptoms in 41 of the 49 cases studied. These data were plotted, and the resulting graph is shown as Figure 1. The graph indicates that the majority of cases occurred in August and the first half of September. A smaller peak occurred in the first week of October. An attempt was made to establish whether these October cases were not present in the area during the earlier period. However, only three of the nine cases had been away during the August epidemic period. Moreover, these nine cases in October were found in five widely-scattered parts of the housing area. Thus there seems to be no evidence to suggest that the second peak was due to an influx of new susceptibles.

Virus Isolations

Fecal samples were obtained from seven of the 49 cases reported above. The samples were taken from individuals with varying degrees of illness. Results of tests for the presence of virus in these samples are shown in Table 4.

Although relatively few stool samples were collected, a high proportion of these were found to contain Echo 9 virus, and no cytopathogenic agent other than Echo 9 was isolated. Whether or not Echo 9 was the only agent present in the population during the period of the study is unknown. However, since data received from the Virus Diagnostic Laboratory, Grace-New Haven Community Hospital,²⁰ show that during the period between 1 July and 7 November 1958, 75 per cent of the 146 agents

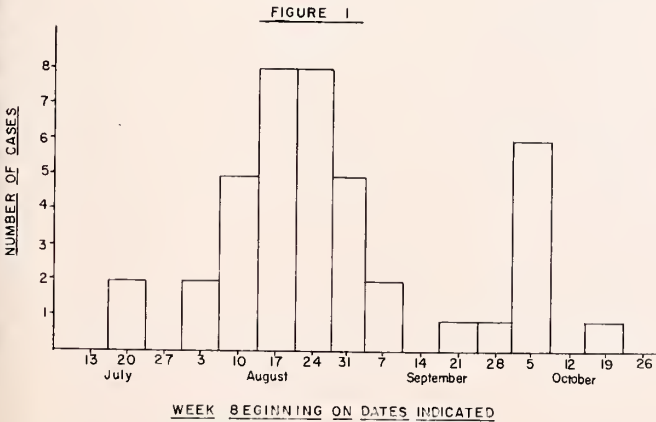


FIGURE 1

TABLE 4
VIRUS ISOLATIONS

CASE	SPECI- MEN	DAY		VIRUS ISOLATED	SYNDROME
		AFTER	ONSET		
SG, 28, female	Stool	1		None	Fever, headache, stiff neck
MR, 26, female	Stool	4		Echo 9	Fever, headache, rash
CP, 25, female	Stool	2		Echo 9	Sore throat
MP, 1, male	Rectal swab	4		None	Fever, rash
CA, 1, female	Stool	3		Echo 9	Fever, rash
DL, 30, male	Stool	0		Echo 9	Fever, malaise
BS, 29, male	Stool	10		None	Fever, headache, stiff neck

isolated from 127 patients throughout the State of Connecticut were identified as Echo 9 virus, it is likely that this agent was responsible for the majority of illnesses during the summer of 1958. Also, the isolation procedure in the present study was such that other members of the enterovirus group—i.e., polioviruses, certain of the Coxsackie viruses, and the other Echo types—would have been isolated if they had been present in the small number of specimens tested.

SUMMARY

An outbreak of illnesses occurring in the late summer and fall of 1958 in a circumscribed population of young adults and young children living in a housing development in New Haven, Connecticut, was investigated. The illnesses were clinically compatible with Echo 9 virus infection, and this agent was isolated from four out of seven stool specimens collected from ill individuals.

It was possible to estimate, largely from the questionnaire data, age-specific attack rates in the juvenile and adult members of the community. These amounted to an attack rate of 22 per cent among the children from infants to six years, and 11 per cent among the adults.

As has been described by other investigators, a different clinical picture was seen in the two age groups, with meningeal symptoms being more common among the adults and a febrile illness with a characteristic exanthem as the usual form among the children.

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SEMI-ANNUAL MEETING—HOUSE OF DELEGATES OF CONNECTICUT STATE MEDICAL SOCIETY

WEDNESDAY, DECEMBER 9, 1959

2:30 P. M.

STRATFIELD HOTEL, BRIDGEPORT

Spontaneous Idiopathic Segmental Infarction Of The Omentum

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Danbury

VASCULAR disturbances of the omentum have been classified by Leitner, et al¹ in the following fashion:

- A. Omental infarction (with or without gangrene) due to torsion
 - 1. Primary or idiopathic
 - 2. Secondary
 - a. Associated with hernia
 - b. Abdominal
 - 1. Intrinsic (cysts and tumor of omentum)
 - 2. Due to other intra-abdominal pathology (metastatic tumor, post-inflammatory adhesions)
- B. Omental infarction (with or without gangrene) due to thrombosis
 - 1. Idiopathic spontaneous infarction
 - 2. Associated with vascular disease (congestive failure, portal vein thrombosis, systemic arterial emboli)
 - 3. Following external trauma to abdomen

The subject of this report is that of omental infarction, without torsion, due to thrombosis, not associated with systemic vascular disease and not accompanied by external trauma. This lesion has been known as acute hemorrhagic epiploitis, idiopathic segmental infarction, and primary omental thrombosis. The name presently used in reference to this unique lesion and serving to distinguish it from omental infarcts due to the specific causes outlined above, is "spontaneous idiopathic segmental infarction of the omentum."

Prior to the report of two cases by Viar, Donald and Berry² in November, 1957, 38 authentic cases had been gathered from the literature. Almost one-half of the total number of cases has been reported since 1952. This indicates that the lesion is being recognized more frequently as a distinct clinical entity and perhaps should be considered as seriously in the differential diagnosis of abdominal disease as are other rare conditions including Meckel's diverticulitis, the infarcted appendix epiploica of the colon, mesenteric and omental tumors and obscure tumors of the retroperitoneum.

As Alecce³ and his colleagues have described in a summary of the outstanding literature on this subject, the lesion can occur in any age group. Males appear to be affected more commonly than females. The symptomatology is atypical, the sole constant feature being the presence of abdominal pain. This can mimic any abdominal lesion depending upon the location of the infarcted omental mass. The right free border of the omentum appears to be the commonest location of this lesion. The most frequent erroneous diagnostic impressions include right sided abdominal diseases such as cholecystitis, appendicitis, pancreatitis and perforated peptic ulcer. Viar describes two cases in which neoplastic lesions of the colon were suspected; one in the cecum, the other in the sigmoid colon. One of the cases presented in this report is similar since an intra-abdominal tumor was suspected despite negative diagnostic studies.

The etiology of idiopathic omental infarction is obscure and several theories have been proposed to explain it. In one of the cases reported by Totten,⁴ the patient gave a history of handling boxes weighing approximately 120 pounds shortly following his noon meal and just prior to the onset of his abdominal pain. This led Totten to the theory that increased intra-abdominal tension incident to straining, coughing, sneezing or lifting may be sufficient to cause rupture of the dependent veins of the omentum with hemorrhagic extravasation and secondary thrombosis. This would be even more likely following a meal when there is a marked increase in the blood supply of the stomach and omentum. The concept of variation in the blood flow to an organ depending upon the physiological demands being made upon it is not new and is supported by the recent experimental work of Peters and Womack⁵ in which they describe marked variations in the blood supply of the stomach in response to certain stresses.

In their discussion of six cases, Pines and Rabinovitch⁶ suggested that post-prandial engorgement of the gastro-epiploic vessels from which the omental vessels take origin, may produce a temporary retardation in blood flow through the omentum. An injury to the endothelial lining of the omental vessels during this phase is likely to be followed by local clotting within the omental veins. They sub-

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stantiated this experimentally by showing that a forcible pull on the jugular vein of rabbits produced endothelial damage and resulted in the formation of a clot at the site of injury. Furthermore, if the lumen of the vein distal to the point of injury was partially constricted so as to retard the flow of blood through the veins, thrombosis occurred more promptly. There was a striking resemblance in the character of the thrombus produced experimentally to that seen in the infarcted omentum.

CASE REPORTS

1. N. S., DH 162865, a six year old white female was admitted to Danbury Hospital on January 12, 1957 with the chief complaint of abdominal pain, nausea and vomiting of two days duration. Her recent past history was significant in that she had a mild upper respiratory infection one week previously accompanied by coughing. Abdominal pain began 48 hours prior to admission and was described as severe, steady and localized in the right lower quadrant. It was accompanied by anorexia and vomiting on one occasion. There was no history of constipation or diarrhea. There was no history of trauma.

The rectal temperature was 100°. Physical examination was unremarkable except for the abdomen which demonstrated tenderness in the right lower quadrant with spasm, rebound and percussion tenderness. Rectal examination was unremarkable. There were no cardiac murmurs. The white blood count was 8,800 with 67 per cent polymorphonuclear leucocytes. The hemoglobin was 12.2 grams. The urine was negative. A pre-operative diagnosis of acute appendicitis was made.

At laparotomy, serosanguinous fluid was encountered in the abdominal cavity. The appendix was normal in all respects. In the right upper quadrant a firm, rubbery mass of omentum covered with fibrinous exudate was encountered. It was hemorrhagic in color and measured 7 x 6 x 4 centimeters in size. There was no torsion of the omentum noted. This lesion was resected and appendectomy was carried out.

Pathological examination of the specimen revealed congestion, hemorrhage and perivascular infiltration with polymorphonuclear leucocytes. The vessels were thrombosed. The pathological diagnosis was omental infarction. The patient's post-operative course was uneventful.

2. M. C., DH 179548, a 72 year old white female, was admitted to Danbury Hospital on January 30, 1959 with the complaint of pain in the right lower quadrant of the abdomen of five days duration. This was aggravated by walking and standing. There was no history of nausea or vomiting and no

preceding history of trauma. Three weeks prior to admission she had had a mild upper respiratory infection associated with pharyngitis and bronchitis. Cough was present and was moderate in degree.

Her past history was notable in that hysterectomy and appendectomy had been performed in 1935. She had been a mission teacher for 40 years in South Africa and had experienced two episodes of amebic dysentery, one of which was complicated by amebic hepatitis, responding well to emetine therapy.

Physical examination on admission to the hospital revealed the rectal temperature to be 99.8° F., pulse 82, blood pressure 122/86. There was no clinical evidence of cardiac disease. Examination of the abdomen revealed a lemon-sized, tender mass in the right iliac fossa. There was no rebound tenderness. There was no rigidity, but voluntary spasm was present on deep palpation in the right lower quadrant. Rectal examination was negative. Pelvic examination revealed the cervical stump to be mobile and non-tender.

The white blood count on admission was 10,000 with a normal differential. The hematocrit was 39 per cent. Urine examination was negative. Liver function tests were normal with the exception of a 3+ cephalin flocculation. Repeated stool examinations were negative for amebae. Benzidine tests for stool blood were positive but the guaiac test on the same stool specimens was negative. The patient had not been on a meat free diet.

X-ray studies of the gastrointestinal tract were normal. Two examinations of the colon failed to reveal evidence of a defect in the cecum or ascending colon. Intravenous pyelograms were also negative.

Because of the persistence of the tender mass in the right iliac fossa it was decided to perform laparotomy. The pre-operative diagnosis was retroperitoneal tumor, possibly lymphosarcoma. At laparotomy on February 9, 1959 a lemon-sized, infarcted mass of omentum was found adherent to the anterior cecal wall. The infarcted tissue occupied the right free border of the omentum. There was moderate inflammatory reaction adjacent to it. Careful inspection of the bowel revealed no intrinsic disease such as tumor, ulceration or diverticulitis. There was no torsion of the omentum and no adhesions were present about it. The patient's post-operative course was uneventful. The infarcted omental mass was resected.

The pathological diagnosis was omental infarction due to unknown cause.

DISCUSSION

This unusual lesion is being noted with increasing frequency in the surgical literature indicating

that it is probably not as rare as can be assumed from the paucity of clinical reports concerning it. It should be a definite consideration in vague, ill-defined, atypical conditions of the abdomen both acute and chronic. The omentum should be palpated and inspected with the same care that the ileum is inspected for Meckel's diverticulum, its mesentery examined for enlarged lymph nodes, the retroperitoneum inspected for tumor, and the appendices epiploicae of the colon observed while seeking the cause of clinical intra-abdominal disease.

An interesting feature of these cases is the fact that both patients had suffered from upper respiratory infections prior to the onset of their symptoms. One had suffered from bronchitis with cough three weeks prior to admission. The child had experienced an upper respiratory infection accompanied by coughing one week prior to admission. This would seem to fit in with Totten's theory that increased intra-abdominal tension coincident with coughing or sneezing might be sufficient to cause rupture of the omental veins with hemorrhage and secondary thrombosis. The time lag between the upper respiratory infection and onset of symptoms is difficult to explain unless one can postulate that the original injury to the intima of the omental vein occurred as a result of Totten's mechanism and was followed by progressive thrombosis until the infarcted area and the inflammatory reaction adjacent to it were of sufficient size to produce the symptoms and signs which led to hospitalization and surgical exploration.

SUMMARY

1. Two cases of spontaneous idiopathic segmental infarction of the omentum are presented, one simulating acute appendicitis, the other an intra-abdominal tumor.
2. The majority of the case reports concerning this lesion have been noted in the recent literature indicating that increasing recognition is being given to it as a distinct clinical entity.
3. This lesion is a significant cause of error in the diagnosis of abdominal disease and should be considered when the pre-operative impression is not confirmed at laparotomy.
4. The presence of upper respiratory infections accompanied by cough in the recent past histories of both cases suggests the possibility of a cause and effect relationship as originally proposed by Totten.

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"To return evil speaking with evil speaking, however, I hold to be unworthy of a philosopher and searcher after truth. I believe I shall do better and more advisedly if I meet so many indications of ill-breeding with the light of faithful and conclusive observation."

—Sir Wm. Harvey in answer to an outright
attack on his work by Riolan

Metabolic Aspects Of Hypoxia

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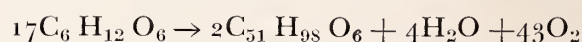
A TISSUE cut off from its supply of oxygen does not immediately cease metabolizing. Many, indeed most, of the reactions of intermediary metabolism do not require molecular oxygen as one of the reactants, and they will continue in its absence. Thus, the term anaerobic metabolism is quite nonspecific and probably should be dropped. The problem of any organism existing under anaerobic conditions is to convert the potential energy of its substrate molecules into biologically useful energy without having to use molecular oxygen. Its problem, in other words, is to remove hydrogen atoms and electrons from substrate molecules without having to use oxygen and produce water.

The ability of the newborn mammal to withstand severe hypoxia is well established. Newborn rats and mice, or fetuses obtained by cesarean section shortly before birth, will survive at least 45 or 50 minutes when placed in an atmosphere of pure nitrogen. This ability to survive prolonged oxygen deprivation declines rapidly after birth and disappears after the first few weeks of life. This remarkable ability of the fetus and newborn to survive oxygen deprivation might conceivably be due to some unique chemical reaction or reactions which are not present in the adult. Or, the fetus might have no unique metabolic reaction but simply differ quantitatively from the adult in certain enzymatic reactions which are present in all tissues. As a third alternative, the fetus might have a lower rate of cellular metabolism, or it might be able to decrease its rate of cellular metabolism without harm, and in this way be better able to withstand the deprivation of oxygen.

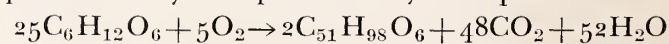
The classic experiments by Himwich and his colleagues¹ demonstrated some 20 years ago that newborn rats injected with cyanide and placed in nitrogen will survive anoxia as well as rats which have not been injected with cyanide. In contrast, when ratlets are injected with iodoacetic acid or with fluoride, their survival time is profoundly decreased when they are subsequently placed in an atmosphere of nitrogen. The animals injected with iodoacetic acid or with fluoride do not accumulate lactic acid

in the tissues and blood as do uninjected control animals placed in nitrogen. Cyanide is known to combine with the iron atom of the cytochrome enzymes and in this way it prevents the transfer of electrons from substrate molecules to oxygen. Since an anaerobic organism is not using molecular oxygen in any case, it is clear why the injection of cyanide does not decrease the survival time of organisms under anaerobic conditions. Fluoride, by forming a complex with magnesium ions, will inhibit to some extent any enzyme which requires magnesium as a cofactor. There are a number of such enzymes in both the glycolytic cycle and the citric acid cycle. Iodoacetic acid inhibits several dehydrogenases, especially 3-phosphoglyceraldehyde dehydrogenase which is an important enzyme in the glycolytic cycle. These experiments led Himwich to the conclusion that the resistance of the newborn to hypoxia is independent of the cytochrome system and is, at least in part, dependent on the energy derived from an accelerated rate of glycolysis.

There has been wide interest in the nature of the metabolic mechanisms which may enable the fetus to survive periods of hypoxia that would be fatal to the adult. Several theories have involved the postulation that fetal tissues have some special pathway of anaerobic metabolism which enables them to survive.² It had been suggested, for example, that the fetus may obtain oxygen by converting carbohydrate to fat as in the reaction:



There is, however, no reaction known in mammalian tissue in which molecular oxygen is evolved. The overall conversion of glucose to a fat such as tripalmitin may be represented by the equation:



The conversion of glucose to fat does not produce molecular oxygen which could be utilized in other metabolic processes. However, hydrogen given off in the reactions of glycolysis or elsewhere could be utilized in the synthesis of fats, for hydrogen is required for the synthesis of fatty acids from the 2-carbon unit acetyl coenzyme A. In a sense, the synthesis of fat provides a "hydrogen sink," a depot for hydrogen atoms, as an alternative for their combination by way of the cytochrome system with oxygen to form water. The coupling of glycolysis and lipogenesis could theoretically make available to the

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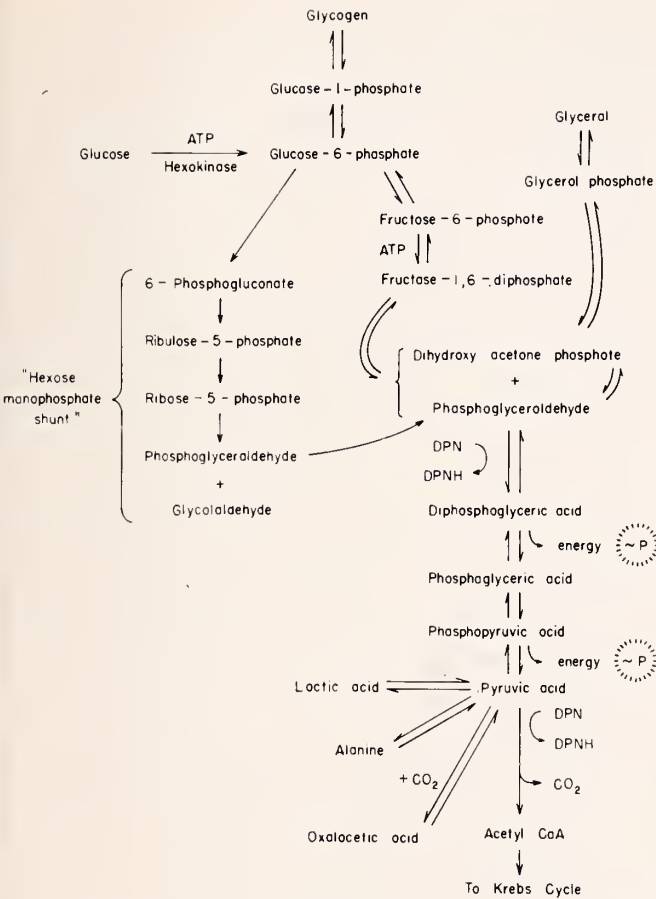


FIGURE 1

Diagram of some of the intermediates in the glycolytic cycle and in the hexose monophosphate shunt.

fetus the energy derivable from glycolysis without the production of lactic acid.

The reactions of the glycolytic cycle shown in Figure 1 may occur either in the presence or the absence of oxygen. The enzymes involved and the intermediate substances which are formed are exactly the same under aerobic or anaerobic conditions. Oxygen, you will note, is not involved in any of these reactions. Thus, the differentiation which is commonly made between aerobic glycolysis and anaerobic glycolysis is to some extent an artificial one. Only after the last step, at pyruvic acid, is there any difference between the two. Glycolysis is commonly measured by the rate of accumulation of lactic acid. However, lactic acid is produced by a number of reactions: by the decarboxylation of oxalacetic acid, from alanine by transamination, as well as by the conversion of hexoses to pyruvic acid and lactic acid. We therefore cannot accept the rate of accumulation of lactic acid as an exact measure of the rate at which hexoses have been metabolized in the glycolytic cycle.

The amount of oxygen available does, in large measure, determine the amount of lactic acid that accumulates. Lactic acid is derived from pyruvic acid by the addition of two hydrogens from reduced

diphosphopyridine nucleotide by the enzyme lactic dehydrogenase. When adequate amounts of oxygen are present, the reduced diphosphopyridine nucleotide is oxidized by other enzymes, and therefore is not available to convert pyruvate to lactate. For this reason, the measurement of the lactic acid content of the tissue does give a rough estimate of how much oxygen was available to it.

There are two reactions in the glycolytic cycle in which energy is released in the form of energy-rich phosphate, adenosine triphosphate. These reactions, which will occur in the presence or absence of oxygen, liberate only a small amount of the total energy of the glucose molecule. There are two energy-rich bonds produced per triose molecule but since two energy-rich bonds are required to introduce glucose into the cycle, one to convert glucose to glucose-6-phosphate and the second to convert fructose-6-phosphate to fructose-1,6-diphosphate, the net yield to the tissue from the conversion of glucose to lactic or pyruvic acid is only two energy-rich phosphates per molecule of glucose.

Figure 2 illustrates some of the steps by which

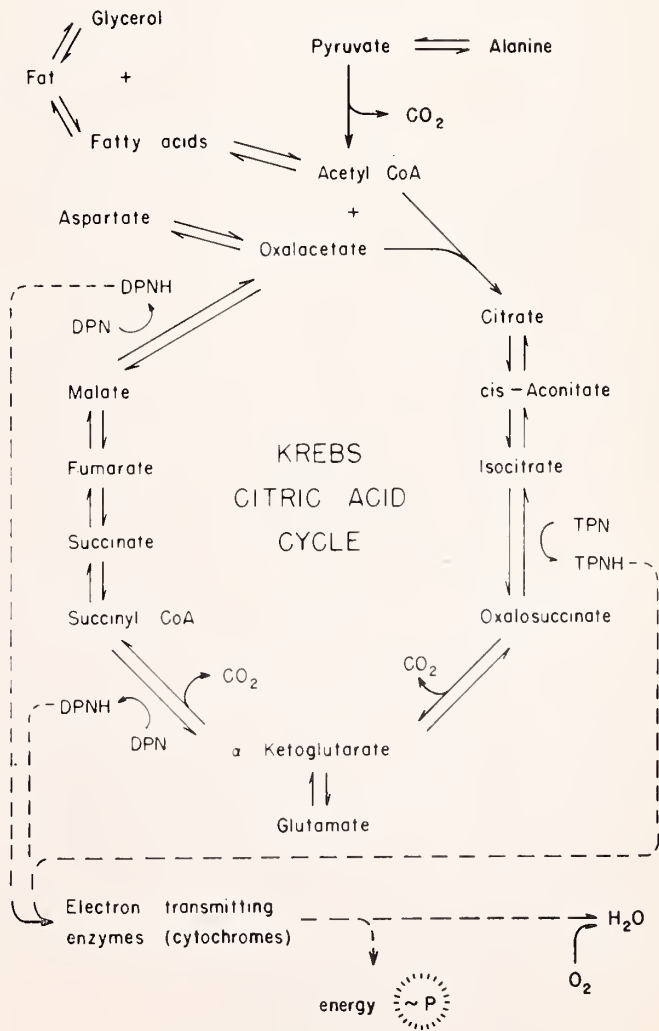


FIGURE 2

Diagram of the intermediates in the Krebs citric acid cycle.

pyruvic acid is metabolized to acetyl coenzyme A, which subsequently condenses with oxalacetic acid to form citric acid. The citric acid cycle of enzymes converts citric acid stepwise to oxalacetic acid. This reacts with another molecule of acetyl coenzyme A to form a second molecule of citric acid and thus complete the cycle. In the course of the reactions from pyruvate through the cycle to oxalacetic acid, three molecules of carbon dioxide are released. These are equivalent to the three carbons of pyruvic acid. In this cycle hydrogen atoms are removed and transferred to one of the pyridine nucleotides. As long as there is a supply of oxidized pyridine nucleotide, DPN or TPN, available, this cycle will continue even in the absence of molecular oxygen. Molecular oxygen is required to react with the hydrogens released from the substrate and transferred by way of TPN or DPN and the electron transmitting system to oxygen to form water.

The eventual fate of all the hydrogens that enter the body as part of the glucose molecule is to combine with oxygen and form water molecules. The oxygen gas which enters the body leaves it, in general, combined with hydrogen as water molecules. The oxygen atoms in the carbon dioxide exhaled is derived from glucose and other substrate molecules. A large amount of biologically useful energy is released as ATP as electrons flow through the electron transmitting system from the pyridine nucleotides to oxygen. Our current estimates indicate that three energy-rich phosphate bonds are produced for each pair of hydrogen atoms which are passed through the electron transmitting system.

Since there are five pairs of hydrogens released in the cycle of reactions from pyruvate to oxalacetate, there are 15 energy-rich phosphates produced per mole of pyruvate which completes one turn of the Krebs cycle or a total of 30 for the two pyruvates which are derived from a molecule of glucose. Six additional energy-rich phosphate bonds are made as the hydrogens given off in the glycolytic system are passed through the electron transmitter enzymes. The sum of these, 36 energy-rich phosphate bonds, is made available to the cell when glucose is oxidized completely to carbon dioxide and water. In marked contrast, the incomplete metabolism of glucose to lactic acid in the absence of oxygen releases only two ATP molecules. However, it is not fair to infer that the citric acid cycle is a more "efficient" mechanism than is glycolysis. The thermodynamic efficiency is about the same in the two kinds of reactions. Glycolysis of course results in the formation of two 3-carbon compounds which can be metabolized further for the production of energy or which can be used in a variety of synthetic reactions.

It is indeed fortunate that the mammalian fetus is resistant to hypoxia because during the birth process

the supply of oxygen to the fetus may be restricted, perhaps for a fairly prolonged time. The blood of the human fetus in the last few weeks of gestation is reported to be no more than 55 to 60 per cent saturated with oxygen. From this one would infer that the oxygen tension in the tissues of the fetus might be very low indeed.

In our initial experiments,³ newborn or fetal rats were injected with radioactive pyruvic acid and placed in a respiratory train in an atmosphere of oxygen or nitrogen. After 45 minutes, the rats were removed, sacrificed, and samples of liver and blood were taken. Samples of the carbon dioxide expired were collected in a respiratory train. Blood was analyzed for glucose and lactic acid and the liver was analyzed for its content of glycogen and fat. After evisceration the carcass was ground and its fats were extracted.

The results shown in Table 1 reveal that animals kept in nitrogen had much less liver glycogen than

TABLE 1
ANALYSES OF NEW-BORN RATS KEPT IN OXYGEN
OR NITROGEN ATMOSPHERE

	IN OXYGEN	IN NITROGEN
Liver Glycogen, mg. per gm. liver	30.2	18.4
CO ₂ Given off, mM. per Kg. rat	14.4	4.1
Blood Glucose, mg. per 100 ml.	81	86
Blood, Lactate, mg. per 100 ml.	27	123
Carcass Fats mg. per gm.	15.9	8.2
c/m/gm. fat*	510	450
Liver Fats mg. per gm.	35.2	30.0
c/m/gm. fat*	1,500	1,550

* Counts per minute and gram fat.

those kept in oxygen. The amount of carbon dioxide given off was also greatly reduced, but these animals did produce some carbon dioxide even though they had been kept under anaerobic conditions. The production of carbon dioxide is, to a considerable extent, independent of the utilization of oxygen. It is formed by the decarboxylation of pyruvic and other acids, and these decarboxylation processes can continue in the absence of oxygen as long as there is some oxidized DPN or TPN available to accept the hydrogens which are produced in the coupled reactions. To satisfy ourselves that the animals were metabolizing during the entire period of anaerobiosis, we collected carbon dioxide in successive ten-minute periods during the anoxia. Carbon dioxide was given off even in the third ten-minute period and some of this carbon dioxide was labeled with carbon-14 and hence must have been derived from the pyruvic acid which had been injected.

The glucose content of the blood was not affected by hypoxia, which suggests that the limiting factor in survival under these conditions is probably not

the supply of glucose in the blood. The lactic acid content of the blood increased tremendously. If this represents the lactic acid content of the total extra-cellular and intra-cellular fluid, then the total lactic acid produced just about accounts for the liver glycogen that disappears. The conversion of this amount of glycogen to lactic acid under anaerobic conditions would release about 0.5 calorie per five gram rat during the 30 minutes of anoxia. If we assume that the metabolic rate of the rat fetus per kilogram of tissue is the same as the human newborn, this amount of energy would supply only about 13 per cent of the caloric needs. It is unlikely that the amount of energy available from the conversion of this amount of glycogen to lactic acid would suffice for the survival of the fetus during the 30 minute period.

We are now attempting to measure directly the amount of heat given off by newborn and fetal rats under aerobic and anaerobic conditions. There are many technical difficulties involved in these measurements because of the small amount involved, and so far the attempts have not been successful. The importance of making such direct determinations of the energy relationships involved is evident. It would help settle the question of whether survival results from a decreased rate of metabolism or from an altered pattern of metabolism which maintains the same caloric output.

It is evident from the figures in Table 1 that the amount of carbon-14 incorporated into fat from pyruvate is essentially the same whether the ratlet was kept in oxygen or nitrogen. There is no evidence for a greater synthesis of fat either in the liver or in the carcass under anaerobic conditions than under aerobic conditions.

The glycogen and lipid content of the rat liver as gestation, parturition, and neo-natal growth occur are presented in Figure 3. The rat is quite different from the human in this respect for its liver begins to accumulate glycogen only in the last part of gesta-

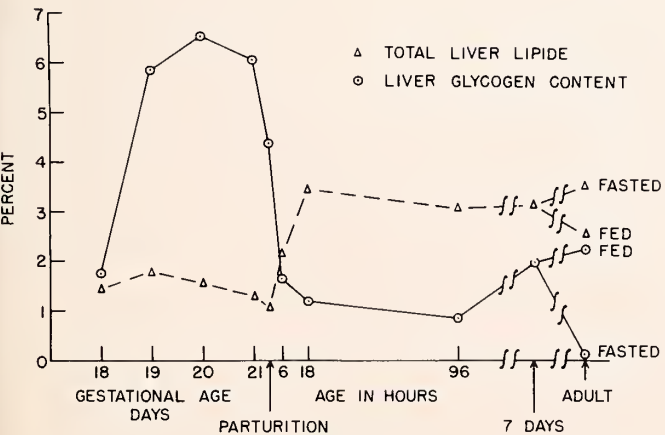


FIGURE 3

Glycogen and lipid content of fetal and newborn rat liver.

FATE OF PYRUVATE IN RAT
LIVER SLICES IN VITRO

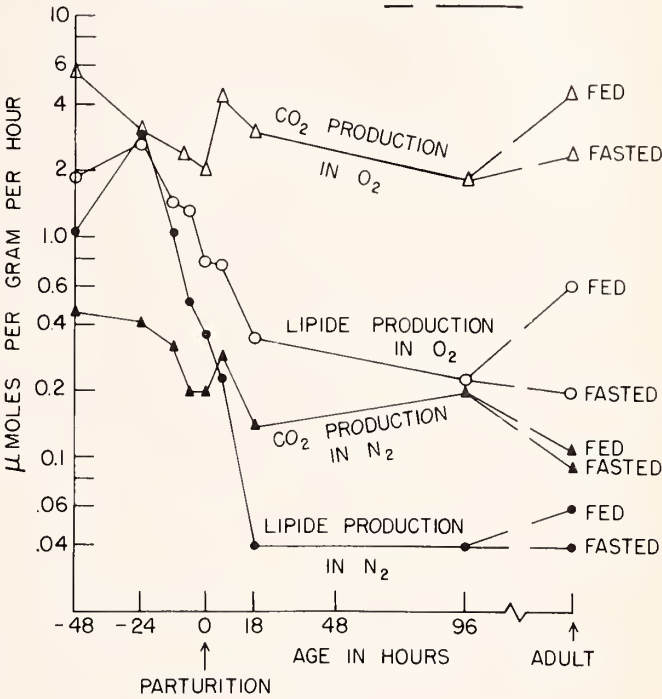


FIGURE 4

Conversion of pyruvate-2-C¹⁴ to carbon dioxide and lipid by liver slices from fetal, newborn, and adult rats, incubated in oxygen and nitrogen.

tion. In contrast, human fetal liver begins to accumulate glycogen at about the 12th week and by the 20th week it contains a large amount of glycogen. The liver of the fetal rat just before birth contains six to seven per cent of glycogen. At the time of birth the glycogen content decreases precipitously. Inspection of the two curves, with glycogen content decreasing and lipid content increasing, might suggest that glycogen is being converted to lipid. However, the increase in the lipid content of the liver occurs only if the rats suckle and it is milk fat that is accumulating in the liver and not fat synthesized from glycogen.

Figure 4 shows the results of experiments in which rat liver slices were incubated in radioactive pyruvic acid.⁴ From suitable analyses, we calculated the moles of pyruvic acid per gram of liver per hour which had been converted to lipid and to carbon dioxide. The rate of lipid production was roughly ten-fold greater in the fetus just before birth than it was in the adult. About two micromoles of pyruvate per hour and gram of tissue are converted to fat whereas in the adult only 0.2 of a micromole are so converted. In the fetal liver just before birth, the rates of lipid synthesis in oxygen and in nitrogen are about the same order of magnitude. The rate of lipogenesis decreases at birth and by 18 hours after birth the difference between aerobic and anaerobic lipogenesis is eight to 10 fold.

Here is a biochemical process which decreases very rapidly after birth. The resistance to hypoxia also decreases very rapidly after birth. It would be tempting to postulate that this process has something to do with the resistance to hypoxia. However, to explain the resistance to hypoxia the fetus should have some process that proceeds more rapidly under anaerobic conditions than under aerobic conditions and not merely one that goes on at the same rate. Furthermore, this increased rate of metabolism, whatever it might be, would have to be some process which would lead to the release of biologically useful energy.

The rate of oxygen consumption and carbon dioxide production by these liver slices is shown in Table 2. The respiratory quotient for the complete

TABLE 2
AEROBIC & ANAEROBIC METABOLISM OF PYRUVATE &
ENDOGENOUS GLYCOGEN BY RAT LIVER SLICES INCUBATED IN
PYRUVATE-2-C¹⁴

AGE	O ₂ CONS.	CO ₂ PROD. (O)	R.Q.
15 days	50.2 ±4.3	66.1 ±6.2	1.32
16-17 days	52.0 ±1.2	70.3 ±3.6	1.35
18-19 days	47.6 ±2.6	64.3 ±1.7	1.37
20-21 days	34.5 ±1.5	56.1 ±1.8	1.64
21-22 days	40.9 ±0.6	51.9 ±3.0	1.27
Newborn	40.8 ±2.0	56.7 ±4.8	1.39
6 hr.	48.4 ±1.4	60.9 ±2.2	1.26
18 hr.	56.3 ±3.1	59.6 ±4.5	1.09
4 days	71.1 ±4.0	66.4 ±4.8	.95
6 days	50.0 ±3.7	62.8 ±5.3	1.29
Adult fed	64.8 ±2.2	81.8 ±5.2	1.26
Adult fasted	62.3 ±1.4	65.9 ±2.1	1.06

All figures are means ± standard error, expressed as micromoles per gram liver and hour.

oxidation of pyruvic acid would theoretically be 1.2. The fact that the respiratory quotient is much greater than this, ranging up to nearly 1.7, is further evidence of rapid lipogenesis.

Suitable fractionation of the lipid extracted from the liver revealed that the phospholipids and neutral fats are synthesized nearly as rapidly anaerobically as aerobically in the fetal and neo-natal liver. In contrast, cholesterol is synthesized much less rapidly under anaerobic conditions. Although the bio-

synthetic steps from acetyl coenzyme A to fatty acids are reductive and the steps from acetyl coenzyme A to squalene are reductive, there are several reactions in the conversion of squalene to cholesterol and other steroids which require molecular oxygen and thus could not proceed under anaerobic conditions.

To obtain a more direct measure of the rate of glycolysis in tissue slices, slices of fetal, newborn, or adult liver were incubated in flasks containing uniformly labeled carbon-14 glucose. At the end of the hour, pyruvate was isolated from the incubation medium as the dinitrophenyl hydrazone. The amount of glucose converted to pyruvate per hour and gram of tissue was then calculated and is shown in Table 3. The metabolism of glucose to pyruvate

TABLE 3
CONVERSION OF GLUCOSE TO PYRUVATE BY LIVER SLICES

	IN O ₂	IN N ₂
Fetal liver	0.53±0.07	3.07±0.32
Newborn liver	0.44±0.06	1.72±0.21
Adult liver	0.41±0.06	1.04±0.14

proceeded at comparable rates under aerobic conditions in the fetal and adult livers. However the ratio of anaerobic to aerobic conversion of glucose to pyruvate was nearly six in the livers of three to four gram fetuses, four in the livers of newborn rats, and only 2.5 in the livers of adult rats. It seems clear that the glycolytic enzymes of the fetal liver respond to anaerobiosis more effectively than do those of the adult liver.

Table 4 compares the metabolism of human fetal and adult liver.⁵ The samples of adult liver were obtained from normal patients in the course of cholecystectomy and the fetal tissues were obtained in the course of therapeutic interruptions of pregnancy. The respiratory quotient for the adult liver, as shown in the Table, is very nearly one, whereas the respiratory quotient for fetal liver is well above one. This again indicates a high rate of lipogenesis in the fetal tissue. The oxygen consumption of the two tissues was the same, 28 micromoles of oxygen per gram of tissue per hour. There is a widely quoted statement that fetal tissues are less active than the comparable adult tissue. Fetal brain does indeed have a lower metabolic rate than adult brain but the activities of fetal and adult liver, as shown here and in the rat experiments, are quite comparable.

The glycogen content of the human fetal liver at this age, about 15 to 20 weeks of gestation, was 120 micromoles per gram of tissue. The adult liver had more glycogen, about 200 micromoles per gram of tissue. The rate of glycogen utilization was greater in adult liver than in fetal liver. This appears to be a reflection of the greater amount of glycogen avail-

TABLE 4
METABOLISM OF HUMAN LIVER SLICES IN VITRO

	FETAL LIVER INCUBATED IN		ADULT LIVER INCUBATED IN	
	OXYGEN	NITROGEN	OXYGEN	NITROGEN
Substrate: Glucose C ¹⁴ , uniformly labeled				
R. Q.	1.31	.....	0.95	.....
Oxygen consumption	28.4	.....	28.4	-155
Glycogen utilization	-54	-68	-114	+73
Glucose production	+13	+14	+59	-17
Glucose utilization	0	-12	-15	+38
Lactate production	+17	+52	+21	+38
Conversion of carbon of glucose to lipid	0.23	0.03	0.15	0.11
Conversion of carbon of glucose to carbon dioxide	0.41	0.08	0.20	0.10
Substrate: Acetate-2-C ¹⁴				
R. Q.	1.19	.....	0.96	.....
Oxygen consumption	28.4	.....	30.1	.....
Glycogen utilization	-40	-52	-114	-116
Lactate production	+16	+40	+18	+34
Conversion of carbon of acetate to lipid	1.42	0.08	0.042	0.0065
Conversion of carbon of acetate to carbon dioxide	0.66	0.065	0.245	0.074

Initial content of glycogen: Fetal liver, 110 μ moles/gm wet tissue.
Adult liver, 200 μ moles/gm wet tissue.
All values except R.Q. are expressed as μ mole/gm tissue/hr.

able. The rate of glucose production is low in the fetal liver, much lower than in the adult liver. This is a reflection of the lesser activity in the fetal liver of glucose-6-phosphatase, the enzyme which hydrolyzes glucose-6-phosphate to release free glucose. In the human as in the rat, the production of lactic acid in oxygen is about the same in fetal and adult liver. Thus, fetal liver is not characterized in our experience by a high rate of aerobic glycolysis. Although the rate of production of lactic acid in oxygen is much the same in adult and fetal tissues, the rate of lactic acid production in nitrogen is much greater in the fetal tissue. Human fetal tissue, like the rat, is characterized by a greater increase in lactic acid production in response to anaerobiosis than is adult tissue.

The several methods of estimating the rate of glycolysis are summarized in Table 5. The production of lactic acid, as measured chemically, was 19 micromoles in oxygen and 51 micromoles in nitrogen, a 2.7 fold increase. However, lactic acid can be derived from substrates other than glycogen and

glucose, and it can be metabolized to a number of other substances. Measuring the production of lactic acid does not provide a valid estimate of the activity of the enzymes of the glycolytic cycle. The amount of pyruvic acid produced by tissues can be estimated by incubating the tissue in a medium containing carbon-14 labeled pyruvic acid and measuring the dilution of the radioactive pyruvate as the tissue produces unlabeled pyruvic acid. In these experiments, 21 micromoles of pyruvate were produced per hour and gram of tissue in oxygen and 39 in nitrogen. Again, pyruvic acid is produced from substrates other than glycogen and glucose, and it is metabolized to many other substances. This method of estimating glycolysis suffers from the same drawbacks as the measurement of lactic acid. Perhaps the most direct measure of the rate of glycolysis is made by incubating a tissue with carbon-14 labeled glucose and isolating pyruvic acid at the end of the incubation period as the pyruvate dinitrophenylhydrazone. In these experiments 0.83 micromoles of glucose per gram tissue and hour were converted to pyruvate in oxygen and 3.1 micromoles of glucose per gram tissue and hour were converted to pyruvate in nitrogen. Thus there is a fourfold increase in glycolysis under anaerobic conditions as compared to aerobic conditions.

In pursuing the hypothesis that lipogenesis might play some important role in anaerobic metabolism, a variety of carbon-14 labeled substrates were incubated with slices of fetal liver under aerobic and anaerobic conditions and the rate at which the sub-

TABLE 5
ESTIMATES OF RATE OF GLYCOLYSIS IN HUMAN FETAL LIVER

	INCUBATED IN		RATE IN N ₂
	OXYGEN	NITROGEN	RATE IN O ₂
Lactate produced	18.9	51.3	2.7
Pyruvate produced	21.1	39.0	1.9
Conversion of carbon of glucose-C ¹⁴ to pyruvate	0.83	3.1	3.7

Values are expressed as μ mole/gm/tissue/hr.

strate was converted to fat was determined. The results summarized in Table 6 show that all of the

TABLE 6
RATE OF LIPOGENESIS BY HUMAN FETAL LIVER

	INCUBATED IN	
	OXYGEN	NITROGEN
Glucose-U-C ¹⁴	0.12	0.01
Glucose-1-C ¹⁴	0.12	0.05
Glucose-6-C ¹⁴	0.12	0.03
Fructose-U-C ¹⁴	0.17	0.03
Pyruvate-2-C ¹⁴	1.18	0.07
Pyruvate-1-C ¹⁴	0.03	0.002
Acetate-2-C ¹⁴	1.35	0.07
Glycerol-2-C ¹⁴	0.15	0.06
Citrate-1,5-C ¹⁴	0.58	0.048

All values are expressed as μ mole of substrate converted to lipid/gm tissue/hr.

substances tested were converted to fats at a much lower rate under anaerobic than under aerobic conditions at this stage of gestation, between 15 and 20 weeks in the human. The most active precursors of lipids, as one might expect, were pyruvic acid and acetic acid, which are converted to fatty acids nearly 20 times more rapidly in oxygen than in nitrogen. Thus, as we compare aerobic and anaerobic metabolism in the human fetus about half-way through gestation, glycolysis is increased fourfold, but lipogenesis is decreased ten to twenty fold.

The radioactive lipid that had been made in one experiment by one sample of fetal liver was isolated, purified, and then used as the substrate in a second experiment. Liver slices from a second fetus were incubated with this radioactive fat as the sole substrate. These experiments showed that the liver could metabolize the radioactive fat to carbon dioxide quite rapidly. Hence, the enzymes required for the oxidation of lipids to carbon dioxide are present at this stage of development and are able to function, but this of course does not prove that these reactions do proceed at a significant rate *in vivo*.

The synthesis of lipids occurred much more rapidly in the liver than in any other tissue tested

TABLE 7
RATE OF LIPOGENESIS FROM ACETATE-2-C¹⁴

TISSUE	INCUBATED IN	
	OXYGEN	NITROGEN
Liver	1.35	0.07
Lung	0.12	0.015
Brain	0.094	0.0014
Kidney	0.058	0.0022
Heart	0.015	0.027
Diaphragm	0.016	0.010

All values are expressed as μ mole of acetate converted to lipid/gm of tissue/hr.

(Table 7). The rates in lung and brain were about one-tenth of that in the liver and the rates of lipid synthesis in heart and skeletal muscle were even lower. In all of these tissues, except the heart, the rate of lipogenesis in nitrogen was much less than the rate in oxygen. Lipids are synthesized by the heart at a very low rate in either oxygen or nitrogen. This is one of the several ways in which the heart differs markedly from other tissues in its metabolic pattern.

By incubating tissue slices in a medium containing glucose labeled in position one or in position six and measuring the rate at which carbon-14 appears in the respiratory carbon dioxide, it is possible to obtain an estimate of how much of the glucose is metabolized by way of the glycolytic pathway and how much by way of the shunt. The amount of glucose-1 carbon-14 that is converted to carbon dioxide is taken as an estimate of the total amount of glucose metabolized to carbon dioxide by both pathways. Carbon-6 of glucose is assumed to be converted to carbon dioxide only by way of the glycolytic cycle and the citric acid cycle. With fetal liver slices incubated in oxygen, the ratio of carbon dioxide production from glucose carbon-6 to that of glucose carbon-1 is 0.42 (Table 8). Something less

TABLE 8
ESTIMATES OF THE ACTIVITY OF THE "HEXOSE MONOPHOSPHATE SHUNT" IN HUMAN FETAL TISSUES

	INCUBATION IN	RATE OF CONVERSION OF CARBON OF GLUCOSE-1-C ¹⁴ TO CARBON DIOXIDE	RATE OF CONVERSION OF CARBON OF GLUCOSE-6-C ¹⁴ TO CARBON DIOXIDE	RATIO OF RATES OF CONVERSION GLUCOSE-6-C ¹⁴ TO GLUCOSE-1-C ¹⁴
Liver	Oxygen	0.45	0.19	0.42
	Nitrogen	0.057	0.0074	0.13
Lung	Oxygen	0.03	0.04	.....
	Nitrogen	0.05	0.04	.....
Heart	Oxygen	0.059	0.022	0.37
	Nitrogen	0.012	0.0035	0.29
Cerebral Cortex	Oxygen	0.13	0.12	0.93
	Nitrogen	0.024	0.017	0.71

Values are expressed as μ mole of substrate converted to carbon dioxide/gm tissue/hr.

than one-half of the glucose is metabolized by the glycolytic cycle and the remainder by an alternate pathway, presumably the hexose monophosphate shunt. Comparable ratios of the activities of the glycolytic and hexose monophosphate shunt pathways have been found in fetal and adult rat liver by other investigators. Different tissues of the body vary in the proportion of glucose metabolized by these two pathways. The lung and brain are exam-

TABLE 9
METABOLISM OF FETAL LIVER (AGE 20 WEEKS) IN OXYGEN
AFTER INCUBATION IN OXYGEN OR NITROGEN

Substrate: Acetate-2-C ¹⁴ +Pyruvate							
FIRST HOUR	SECOND HOUR	OXYGEN	GLYCOGEN	PYRUVATE	LACTATE	CARBON OF ACETATE CON- VERTED TO CAR- BON DIOXIDE	CARBON OF ACETATE CONVERTED TO LIPID
INCUBATED IN		USED	USED	USED	MADE		
Oxygen	.....	35	26.5	29	22	0.17	1.07
Nitrogen	.....	....	49	19	43	0.09	0.07
Oxygen	Oxygen	29	48	27	17	0.51	0.79
Nitrogen	Oxygen	24	62	17	16	0.31	0.84

All values are expressed as μ mole/gm tissue/hr.

ples of tissues which appear to have little or no hexose monophosphate shunt whereas our recent experiments have shown that the adrenal cortex has a remarkable high rate of shunt metabolism, with a G6/G1 ratio of 0.05.⁶

It is evident that glucose-1 is converted to carbon dioxide more rapidly than glucose-6 under anaerobic conditions as well as under aerobic conditions. The shunt pathway requires triphosphopyridine nucleotide as hydrogen acceptor. This suggests that fetal liver either has a large store of oxidized TPN or that it has some method of reoxidizing reduced TPN. Reduced TPN is required for the synthesis of fatty acids, steroids, proteins, and certain constituents of nucleic acids. A tissue undergoing rapid growth might be expected to utilize these mechanisms for the reoxidation of reduced TPN.

There is a widespread belief that anoxia, even of short duration, irreparably damages tissues. It appeared possible that when a tissue slice was incubated under anaerobic conditions it might "die" after only a few minutes of incubation. To test this point, slices of liver or brain from fetuses of 20 to 25 weeks gestational age were prepared and placed in eight Warburg vessels. Four of the vessels were gassed with oxygen and four were gassed with nitrogen. At the end of an hour, the slices from two of the vessels originally gassed with oxygen and the

slices from two of the vessels originally gassed with nitrogen were removed, placed in fresh incubation medium in other vessels, gassed with oxygen, and incubated for a second hour. The experiment provided a comparison between the previous hour in either oxygen or nitrogen.

The results presented in Table 9 show that the oxygen consumption of the slices that had been in nitrogen the previous hour was about 80 per cent as great as that of the tissues in oxygen the previous hour. The figures for glycogen utilization were calculated from the difference in glycogen content before and after incubation and the figure given in the table represents the total glycogen which disappeared over the two one-hour periods. The slices that had been in nitrogen the previous hour utilized less pyruvate than the ones that had been in oxygen. The amount of lactic acid produced was similar in the two. The rate of metabolism of acetic acid to carbon dioxide serves as a measure of the activity of the enzymes of the citric acid cycle. In this respect the slices that had been anaerobic were not quite as active as the ones kept in oxygen the previous hour. However, their ability to convert labeled acetate to fatty acids was equal to or even greater than the ability of the slices kept in oxygen. Thus, the liver slice that had spent a full hour in complete anoxia had many of its enzymatic functions intact. The ability to synthesize fatty acids and to oxidize substrates by

TABLE 10
METABOLISM OF FETAL CEREBRAL CORTEX (AGE 25 WEEKS) IN OXYGEN
AFTER INCUBATION IN OXYGEN OR NITROGEN

Substrate: Acetate-2-C ¹⁴ +Pyruvate						
FIRST HOUR	SECOND HOUR	OXYGEN	PYRUVATE	LACTATE	CARBON OF ACETATE CONVERTED TO CARBON DIOXIDE	CARBON OF ACETATE CONVERTED TO LIPID
INCUBATED IN		USED	USED	MADE		
Oxygen	.....	16.2	17.6	4.0	0.19	0.005
Nitrogen	.....	.....	10.9	5.5	0.04	0.0015
Oxygen	Oxygen	9.6	11.8	1.7	0.11	0.0017
Nitrogen	Oxygen	7.8	7.9	2.0	0.08	0.0017

All values are expressed as μ mole/gm tissue/hr.

way of the Krebs cycle were both essentially unimpaired.

Since the brain cells are believed to be exceptionally sensitive to oxygen deprivation, comparable experiments were performed with slices of fetal cerebral cortex. These are summarized in Table 10. Again, the oxygen consumption of the slice of cortex decreases with the time of incubation. However, the ones kept in nitrogen for the previous hour consumed about 80 per cent as much oxygen as the ones kept in oxygen the previous hour. The ones that had been anoxic utilized less pyruvic acid and converted somewhat less acetate to carbon dioxide, but the amounts of lactic acid produced in the two types of tissue were about the same. Thus, like the liver, the cells of the cerebral cortex are remarkably active after an hour of complete anoxia. We have, of course, no evidence that these brain cells could initiate or transmit nerve impulses.

Histologic comparison of the condition of the tissues that had been incubated in oxygen or in nitrogen revealed that there is very little difference between the two. There are some blank spaces in the cells of the tissue incubated in nitrogen which we interpret as places where glycogen had been and had been used up. From chemical analyses we know that there was a great deal less glycogen in this slice than in the other one.

All of the experiments were designed to test the maximal activity of the enzyme systems involved. An excess of substrate was provided in each experiment so that the activity of the cellular enzymes, and not the concentration of the substrate, was the rate-limiting factor. The object of the experiments was to measure the activity of these enzyme systems under aerobic and anaerobic conditions. The results provide us with an estimate of the upper limit of the metabolic activity of the tissue, but they do not, and indeed they cannot, provide an estimate of the extent of metabolism *in vivo*.

These experiments with tissues from human fetuses, one third to one half of the full gestational

age, show that lipids are synthesized at a much lower rate in nitrogen than in oxygen. The experiments with the rat fetus just before term had shown that lipogenesis proceeds at essentially equal rates in nitrogen and oxygen. In other experiments we found that the tissues of rat fetuses half way through gestation resemble those of the human fetus half way through gestation, that is, they show a marked difference in the rate of lipogenesis under aerobic and anaerobic conditions. In the livers of these immature fetuses, lipogenesis *in vitro* proceeds under anaerobic conditions at about 10 per cent of the rate under aerobic conditions.

With the kind assistance of Professor Donald Barron of the Department of Physiology at Yale, we have been able to do some experiments with goat fetuses either early in gestation or near term. These experiments (Table 11) demonstrate that the syn-

TABLE 11
METABOLISM OF SLICES OF GOAT LIVER INCUBATED IN VITRO

	LIVER OF FETUS 48 DAYS GESTATION INCUBATED IN		LIVER OF FETUS 141 DAYS GESTATION INCUBATED IN	
	OXYGEN	NITROGEN	OXYGEN	NITROGEN
Conversion of acetate- 2-C ¹⁴ to lipid	0.675	0.065	0.027	0.022
Conversion of pyruvate- 2-C ¹⁴ to lipid	0.756	0.040	0.061	0.068
Lactate produced (acetate substrate)	14.5	29.7	10.9	23.6
Lactate produced (pyruvate substrate)	19.4	42.2	19.2	33.0

The numbers are the means of six experiments, expressed as μ mole/gm wet tissue/hr.

thesis of lipids from labeled acetate or pyruvate proceeds at essentially equal rates in oxygen and nitrogen when the tissues come from goat fetuses near term. However, the tissues of fetuses early in gestation again show a much higher rate of lipogenesis in oxygen than in nitrogen. The fetal goat liver near

TABLE 12
METABOLISM OF LIVER SLICES OF 38-WEEK FETUS

	PYRUVATE-2-C ¹⁴ INCUBATED IN		GLUCOSE-C ¹⁴ INCUBATED IN		ACETATE-2-C ¹⁴ INCUBATED IN	
	OXYGEN	NITROGEN	OXYGEN	NITROGEN	OXYGEN	NITROGEN
Oxygen consumption	30.1	.....	35.0	.....	37.4	.....
Glycogen utilization	143	185	201	227	158	244
Glucose production	.....	.....	54	49	.....	.....
Pyruvate utilization	32	30	.....	.....	.....	.....
Pyruvate production	5.3	8.5	.....	.....	.....	.....
Lactate production	24	45	22	35	24	42
Conversion of carbon of substrate to carbon dioxide	1.02	0.015	0.18	0.022	0.45	0.015
Conversion of carbon of substrate to lipid	0.144	0.012	0.073	0.033	0.22	0.021

All values are expressed as μ mole/gm tissue/hr.

term has a markedly lower rate of lipogenesis in both oxygen and nitrogen than it has earlier in gestation.

The only human tissue from a fetus near term that has been available for examination was the liver of an anencephalic child of 38 weeks gestational age. The infant did not breathe and the tissues were obtained immediately after death. The liver had a high glycogen content, 325 micromoles per gram of tissue. The tissue had a normal rate of oxygen consumption, lactate production, glucose production, and pyruvate production as shown in Table 12. It is of interest, however, that the rate of synthesis of lipids under aerobic conditions was again much less than that observed in the tissues of younger fetuses. This was equally true with labeled glucose, pyruvate, or acetate as substrate. The pattern of lipogenesis therefore is comparable to that in the liver of a rat some 24 hours or so after parturition rather than to that which obtains in the rat just before birth. The rate of lipogenesis under anaerobic conditions is substantially less than under aerobic conditions. This again is similar to the rat liver one day after birth. This may possibly be correlated with the idea that the newborn rat is more immature than the newborn human. If observations were made on human tissues of perhaps 32 to 36 weeks of gestational age, lipogenesis might be found to occur at high rates which are essentially equal in oxygen and nitrogen.

It is conceivable that the differences between young and term fetal tissues represent a physiologic adaptation to persistent tissue hypoxia in the latter part of gestation, which is evident as changes in the amount and activity of the enzymes of the glycolytic cycle and perhaps of other enzymes as well. This may be correlated with several reports in the literature that the oxygen saturation of the human fetal blood is less at term than in the previous month. If the oxygen tension in the tissues was low for a prolonged period of time the fetal tissues might undergo enzymatic adaptations which would provide more energy without utilizing oxygen. After birth, when the tissues are well oxygenated, this enzymatic adaptation might be reversed and the pattern of metabolism would rapidly change to that characteristic of the adult. Such changes in metabolism are evident within 18 hours after birth in the rat.

An adaptive increase in the activity or amount of an enzyme usually occurs in response to an increased concentration of its substrate. The adaptive response postulated here in fetal tissues would occur pre-

sumably not because of the lack of oxygen itself but indirectly in response to an increased concentration of the substrate of the enzyme involved. The accumulation of intermediates in the glycolytic cycle would occur in response to tissue hypoxia and this would lead secondarily to an adaptive increase in enzyme activity. As the increasing hypoxia forced the tissue to meet more and more of its energy requirements by glycolysis, and possibly by other energy yielding reactions which can proceed in the absence of molecular oxygen, the concentration of the substrate of the rate-limiting enzyme would increase. This would lead to an increase in the amount or activity of the rate-limiting enzyme.

The present experiments show that lipogenesis can be of no significance in the ability of the fetus half way through gestation to withstand hypoxia. Under anaerobic conditions lipogenesis is decreased whereas glycolysis is increased. Lipogenesis might conceivably play some role in the resistance of the fetus near term to hypoxia. Both rat and goat tissues near term show rates of lipogenesis in the liver which are essentially equal in oxygen and nitrogen. However, the rate is no greater in nitrogen than in oxygen as one would expect if this were an important factor in survival during anoxia. It would appear then that the remarkable resistance of the mature fetus to hypoxia is not the result of some single metabolic change but is the result of a combination of several, perhaps many, alterations in metabolic patterns, each of which adds a small amount to the energy economy of the fetus. Added together, these metabolic adaptations provide a considerable measure of safety to the fetus as it undergoes the birth process.

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Neuromuscular Dysfunction And Treatment In Athetosis

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THERE appears to be at present a preoccupation with the involuntary motion of athetosis.^{1,2,3} Voluntary motor power tends to be regarded as normal, and function is supposedly interfered with by involuntary "overflow."^{4,5,6} Thus, treatment is directed at controlling by braces or surgery the involuntary motion of the athetoid. If the patient is carefully examined, definite deficiencies of voluntary motion will be found. The very nature of these deficiencies points not to weakness from disuse, but to a central defect of function with regard to voluntary motion.

DISTURBANCE OF MOTOR FUNCTION

Abnormal motion in athetosis varies in quantitative degree from violent, spontaneous discharges of athetoid movement, through less intense spontaneous athetosis, to athetoid irradiation* in voluntary or reflex activity. Irradiation is a normal component of voluntary movement and occurs in specific patterns. Certain movements stimulate other specific associated movements. For example, elbow flexion and supination tend to be automatically associated with such motions as wrist extension and thumb abduction. Unlike the normal, the irradiation patterns of motion seen in the athetoid are often excessive and vermiform in character, under poor voluntary control and poorly timed and synchronized.

Violent spontaneous athetosis at rest is not often accompanied by effective voluntary motion of the involved muscle groups. Attempts at voluntary motion, or other stimuli such as startle, will increase athetosis, adding abnormal irradiation to the basic athetosis occurring spontaneously. Some degree of voluntary control is usually seen in patients with moderate spontaneous athetosis. Mildly involved patients may show little or no spontaneous athetosis at rest, but on attempted voluntary motion abnormal irradiation in an athetoid form will occur. There is usually in these cases some degree of voluntary control, but even here voluntary movement is far from normal. It is not uncommon to find intense spontaneous athetosis in one part of the body,

while the remainder shows athetosis only on attempted voluntary movement.

DEFICIENCIES OF VOLUNTARY MOTION IN ATHETOSIS

The patient with athetosis demonstrates definite deficiencies of voluntary motion. Though he may show no spontaneous athetosis at rest, the defects of function may still be severe and voluntary power of the muscles of the neck, trunk and arms may be so poor as to make even sitting impossible.

A deficiency in contraction of muscle groups from the stretched position is a routine finding. For example, an attempt at contraction of the radial wrist extensor from a position of ulnar flexion will result in poor voluntary contraction of the extensor accompanied by athetoid irradiation of nerve impulses into synergistic muscles such as the finger extensors. If resistance is applied to the attempted extension of the wrist, the accompanying irradiation will increase, and it may spread not only throughout the arm but also to the face, the other arm, or even the trunk and legs. On the other hand, a more effective voluntary contraction of the prime mover generates less athetoid irradiation. In general, the less effective the voluntary contraction of the prime mover, the more intense and widespread the irradiation. Defective voluntary motion is thus a stimulus to athetoid irradiation. Stretch, instead of being a stimulus to muscle contraction as in corticospinal or lower motor neuron lesions, may in this instance be an inhibitor of voluntary motor function. The pattern of irradiation seen in individual cases at different times of testing is a constant predictable factor, and although some individual differences may occur, this pattern is often similar from case to case. In contrast to the great deficiency of voluntary isotonic* contraction from stretch, voluntary isometric† contraction in the shortened range of the same muscle group is much more effective as a rule. This difference between voluntary isotonic and isometric function is found not only in athetosis but also in Parkinson's syndrome and chorea. Athetoid irradiation is also less during isometric than during isotonic contraction. While isometric function is superior, it is usually less than normal in power. Isotonic function is tested by manual muscle testing against resistance of active movement from the stretched position of the muscle. Isometric function

* *Irradiation*: The dissemination of nerve impulses to synergistic muscle groups in specific patterns, resulting from a relatively strong discharge of nerve impulses to the prime mover, in reflex or voluntary activity.

is tested in the same muscle by manual muscle testing against resistance holding in the shortened range of the muscle. In skilled hands this is a fairly accurate technique of measurement.

Other difficulties of neuromuscular function in athetosis include poorly sustained isotonic and isometric function throughout the range of motion, and often an inability to contract isotonically in the shortened range of the muscle. In addition to defective voluntary power in individual muscle groups, patients with athetosis show characteristic imbalances of antagonistic muscle groups resulting in commonly seen athetoid postures. For example, the position and pattern of deformity of the arms in the athetoid is often one of external rotation at the shoulder and flexion at the elbow. Muscle testing will reveal considerably greater voluntary power of these groups in relation to their antagonists. Imbalances such as these prevent the antagonists from ever contracting efficiently since they are not only weak but also stretched, and thus in a position of minimal voluntary power and maximal athetoid irradiation. This type of imbalance combined with a varying amount of spontaneous involuntary athetosis may be responsible for the so called "tension," in which a patient is fixed in a posture from which he has little chance of moving voluntarily.

The disturbance of irradiation patterns in the athetoid is an interesting phenomenon. Normal voluntary activity is, as we have already pointed out, laid down in specific patterns of function according to the irradiation of nerve impulses through synergistic muscle groups. Irradiation often occurs in the athetoid in abnormal patterns. For example, an attempt at a movement pattern of knee extension, ankle dorsiflexion and inversion may result, in spite of all efforts to the contrary, in knee extension, ankle plantarflexion and inversion. If the patient is able with some effort to perform a pattern correctly, the timing of its performance is likely to be asynchronous. Thus, in the above pattern of motion the knee is likely to be completely extended before the ankle motion is even begun, whereas in the normal these two motions are carried out synchronously and are completed at the same time.

CEREBELLAR-STRIATAL ANTAGONISM

In athetosis, as pointed out previously, a characteristic finding is less power in isotonic contraction (active motion) in the lengthened range compared with isometric contraction (holding) in the shortened range of the same muscle or muscle group. This isometric predominance has also been observed

routinely in other disorders of the basal ganglia such as Parkinson's syndrome.

On the other hand, in cerebellar ataxia and asynergia, isometric contraction in the shortened range is weaker than isotonic contraction in the lengthened range of the same muscle or muscle group.⁷ This isotonic predominance is in direct contrast to the isometric predominance noted in disorders of the basal ganglia. A theory of cerebellar-striatal antagonism has been proposed,⁸ with the basal ganglia considered as facilitating isotonic contraction and the cerebellum facilitating isometric contraction. The cerebellum and the basal ganglia are considered antagonistic in these functions and normally in equilibrium.

Based on this concept of antagonistic facilitating mechanisms, it was suggested that relatively unchecked activity of the basal ganglia, resulting in isotonic predominance, may play a role in the incoordination observed in patients with cerebellar disorders. In order to test this hypothesis, depression of the basal ganglia in cerebellar cases was attempted by means of a drug producing pseudoparkinsonism. It was felt that depression of the basal ganglia might improve cerebellar asynergia by decreasing isotonic predominance and helping to restore cerebellar-striatal equilibrium.

Thiopropazate (dartal) was administered to 24 patients with cerebellar ataxia and intention tremor. Significant improvement in coordination was observed in a majority of cases, associated with increased voluntary isometric contraction and diminished isotonic contraction.⁸ Signs of pseudoparkinsonism appeared in some cases but were minimal or absent in most of the patients. The action of the drug in depressing the basal ganglia rather than its tranquilizing effect appeared to be responsible for the beneficial effect on cerebellar asynergia.

It then seemed logical to test the effect of depression of cerebellar function on voluntary motion and on isometric-isotonic function in patients with disorders of the basal ganglia. Diphenyl hydantoin (dilantin) readily produces cerebellar signs in addition to its well known anticonvulsant action. This drug was administered to 14 patients with disorders of the basal ganglia, including six with athetosis, seven with Parkinson's syndrome and one with chorea. Diphenyl hydantoin produced increased voluntary isotonic contraction, associated with improvement in voluntary motion.⁸ Rigidity in Parkinson's syndrome was reduced. Cerebellar asynergia appeared in some cases from the drug, but was absent in most of the patients. These preliminary observations on thiopropazate (dartal) in cerebellar asynergia and on diphenyl hydantoin (dilantin) in disorders of the basal ganglia lend support to the theory of cerebellar-striatal antagonism.

* Isotonic; active voluntary shortening of a muscle or muscle group.

† Isometric; active voluntary holding of a muscle or muscle group against equal resistance; that is, a static hold.

It is generally accepted that athetosis and Parkinson's syndrome are related to pathology of the basal ganglia. Since dantrol produces pseudoparkinsonism there is reason to believe that the action of the drug includes depression of the basal ganglia.

DIPHENYL HYDANTOIN IN ATHETOSIS

Diphenyl hydantoin (dilantin) has been administered to six patients with athetosis. These preliminary observations have revealed significant improvement in voluntary motion and performance in these cases. Isotonic contraction was increased and isometric contraction was diminished usually within three days after commencement of dosage, a change which is certainly not produced by therapeutic exercise in such a short time. Spontaneous involuntary athetoid motion did not appear to be modified, but athetoid irradiation was decreased as would be expected on the basis of the above analysis of the neuromuscular dysfunction found in athetosis. Cerebellar signs manifest by nystagmus appeared in one case, but these were eliminated by reduction in dosage of the drug. No other side effects of the medication were noted. One child and three adults had congenital athetosis, one adult had right hemiathetosis following a cerebrovascular accident and another adult had progressive generalized athetosis with onset ten years before, which was apparently heredo-familial in origin. All of these patients except the latter had been under observation and treatment for more than a year before the initiation of diphenyl hydantoin administration. All had shown some improvement on a program of physical therapy and all were alert and cooperative. The addition of dilantin resulted in prompt and striking improvement in neuromuscular function and performance which did not appear to be related to any change of attitude but rather to the effect of the drug on voluntary motion.

A 30 year old man with generalized congenital athetosis on a dosage of diphenyl hydantoin of 200 mg. per day, showed improvement in the deficient isotonic contraction of the muscles and some decrease in isometric contraction. There were no side effects from the drug and no cerebellar signs were noted. Skilled activities with either hand showed significant improvement, with diminished athetoid irradiation in voluntary motion. Control of facial expression was definitely improved.

The patient with right hemiathetosis improved in her ability to perform isotonic contraction on diphenyl hydantoin 100 mg. per day. Previously, the right wrist was held in flexion and ulnar deviation whenever she picked up an object with this hand. On diphenyl hydantoin she noted that her right wrist was held in extension when picking up objects, and that this occurred naturally, without her thinking about it. This improvement was associated

with increased strength in isotonic contraction of the right wrist extensors, and decreased athetoid irradiation in the right hand. When the drug was discontinued she reverted to the previous pattern, the wrist being held in flexion. She again improved when diphenyl hydantoin administration was resumed.

Another adult completely disabled by generalized athetosis improved in speech and sitting balance to a significant degree on diphenyl hydantoin 100 mg. per day. The patient with progressive familial athetosis improved considerably in walking and skilled use of the hands on diphenyl hydantoin 100 mg. per day. When dosage was increased to 130 mg. per day, he developed nystagmus which, however, disappeared when the dosage was reduced to the previous level. Neuromuscular re-education was more effective as a result of the improved isotonic function resulting from diphenyl hydantoin.

A seven year old boy with severe generalized congenital athetosis showed significant improvement in isotonic contraction on a dosage of diphenyl hydantoin 100 mg. per day, without toxic effects or signs of nystagmus. The improved isotonic function was of value in accelerating response to a 10 week rehabilitation program. He improved in balance and gait and was able to walk independently without braces and with a walking frame with only standby assistance. Prior to the commencement of drug treatment and physical therapy he had been unable to walk except with maximal assistance.

These preliminary observations are encouraging, and suggest that diphenyl hydantoin may be of value in the treatment of athetosis. It appears likely that cerebellar depression by the drug is responsible for the improvement in voluntary isotonic contraction of the muscles. Diminished athetoid irradiation is apparently secondary to the increased isotonic strength of contraction produced by diphenyl hydantoin. The drug appears to be useful in accelerating neuromuscular re-education in athetosis.

THERAPEUTIC EXERCISE IN ATHETOSIS

The treatment of the athetoid patient by therapeutic exercise should be directed at the specific deficiencies of neuromuscular function shown in the individual patient. For this reason, accurate muscle testing of isotonic, isometric and eccentric function should be carried out, and weakness, fatigability and poor duration of function carefully noted. Defective voluntary isotonic muscle contraction has been shown to be directly related to athetoid irradiation. Increased strength of isotonic contraction results in a corresponding decrease in athetoid irradiation. The improvement in power of voluntary motion assists in reducing the functional disability of the patient.

Adapted neuromuscular facilitation techniques⁹

are used as a means of improving function. Stretch cannot be used as a facilitating mechanism, but rather function from stretch is a goal to be achieved by therapeutic means. Isometric holding which is comparatively efficient is used to initiate isotonic contraction. For instance, if the quadriceps muscle is to be strengthened the muscle group is placed in the shortened position with the knee in complete extension, and the patient is asked to hold against resistance. This hold is then broken by the therapist and the contraction becomes an eccentric one. When the middle range of motion is reached, the patient is asked to extend the knee actively against resistance. Care must be taken not to place the quadriceps on too much stretch, for this will result in a poor isotonic contraction. Gradually, as efficiency of isotonic function improves, the muscle can be moved into a more and more stretched position until the patient can contract it isotonicly through a complete range of motion. This technique serves not only to improve voluntary isotonic function, but it also aids in more efficient isometric and eccentric contraction. While this technique of treatment is being carried out, a great deal of abnormal irradiation will necessarily occur. This can be ignored during treatment and it will be found that athetoid irradiation decreases as the voluntary power of the patient improves. This method of management is in direct contrast to the conventional system of treatment by relaxation, in which the patient is encouraged to relax voluntarily, thereby supposedly decreasing his athetoid involuntary motion, and following this with attempts at assisted or free movement.

Correction of imbalances between antagonistic muscle groups is achieved by improving the strength of the weaker muscles, and by this means, changing the defective postures so frequently produced by these imbalances. The frequently seen position of the arms in which the shoulders are externally rotated and the elbows flexed, can often be changed so that the arms are held by the sides.

As irradiation patterns of motion are in themselves deficient in the athetoid patient, mass movement patterns are not always useful as a facilitating mechanism.⁹ Those parts of a pattern which are

intact may be used, but generally speaking we aim to retrain deficient movement patterns from two points of view; namely, accurate combinations of synergistic muscle groups, and synchronous timing.

Training in skills and gait should not be overlooked, and all patients should be encouraged to practise rolling, kneeling, crawling, walking on the knees, standing and walking. Bracing should be kept to a minimum wherever possible, since a patient in a brace does not use even his existing function, poor though it may be, and will therefore show decline of voluntary movement from disuse. With this concept of athetosis, bracing is intended not to prevent involuntary motion, but to provide support essential for functional activities which weak muscles are not capable of carrying out. Approached in this way braces can be used less extensively and with better restoration of voluntary function.

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The Serendipity Involved In Finding The Cause Of Shoe-Leather Dermatitis

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SERENDIPITY is defined as the gift of finding valuable or agreeable things not sought for.

This story dates back to March, 1946, at which time a girl came into the office because of having developed a rash on her hands from glue which she had used at work to seal packages. Within a few weeks, she also developed a bilateral symmetrical eruption of the feet, sharply outlined to the parts in contact with her shoes, which persisted until she ceased wearing leather shoes. On several occasions in the next two years, for one reason or another, she *did* wear leather shoes (against my advice!). Her hands and feet would break out each time.

Seven years later, in 1953, a second patient told me he worked in a glue factory making glue from shoe leather trimmings. He also had a severe dermatitis of the hands and feet, and, as with the previous patient, the rash on his feet was sharply outlined to the parts in contact with his shoes.

From that time on, close attention was paid to all patients who presented themselves with rashes from chromium compounds;—their feet were always examined to see if they had a rash from their shoes;—and several did! These cases aroused my curiosity, but not to the point of action until I saw an indigent patient at Long Island Hospital who said that in 1933 and 1934, while working in a leather tannery, his hands broke out, and that subsequently, for the ensuing 20-odd years, he had never been able to wear leather shoes without developing a rash. He had been seen by many dermatologists (none of whom had told him to discontinue wearing leather shoes); he had been in many hospitals (where, although not wearing leather *shoes*, he would wear leather *slippers*). All during that time, he had never been able to keep a job because of his constantly recurring dermatitis.

Requested to speak at the annual meeting of the American Academy of Dermatology in December 1955 at Chicago, I reported a preliminary account of these clinical findings, namely, that shoe leather could cause a rash on the feet of susceptible people. Having finished my remarks, one of the listeners got up and said:

"Does not Dr. Morris know that you cannot get a

rash from the chrome in your shoes, because the only chromium compounds that are sensitizers of the skin are the *hexavalent* ones (those with a chemical valence of 6); whereas the chromium in shoes has a valence of 3."

He further enunciated:

"All dermatologists know that the chromium placed in the leather by the chrome-tanning process is so firmly fixed in the leather that it is impossible for it to get out of a shoe and onto a person's skin."

My rebuttal was something like this:

"The man who originally said that only chrome with a value of 6 can be a skin sensitizer must be dead by now; I have never met him, but before I die I expect to prove him wrong. Also, I will prove that chromium can be removed from the shoes."

It was evident that I must prove my clinical findings; but, how could one do this? It had never been done before. Shortly after my return to Boston, a phone call was received from an old friend of mine, Doctor Clarence C. Maloof, the Medical Director of the A. C. Lawrence Leather Company in Peabody, Mass. He said, "George, today I am going to win \$5 from one of our leather chemists, because he thinks I will never be able to find a dermatologist who will admit that it is possible to get a rash from the chrome in shoe leather; but I know that you believe that this is so." My answer was that I would like to meet that chemist, and Dr. Maloof's answer was, "He'd like to meet you, too." So we arranged a luncheon meeting, of which there have been several since.

At the first meeting, the leather chemist looked across the table from me and said, "You know nothing about the chemistry of chromium in leather; but if you will read a couple of books on the subject, we can get together and maybe we can talk some common sense about chromium."

The American Academy of Dermatology had released my paper for publicity purposes, and it was printed in various newspapers in this country. Shortly afterwards, I received a letter from the leather industry in which they said,

"The claims made in your article run contrary to the clinical and laboratory findings that have been compiled over a period of more than 50 years. . . . We would like to receive a copy of your speech to

This paper was read by Dr. Morris at the 38th Massachusetts Safety Conference, held in Boston, Mass., on March 16, 1959 (in the Industrial Hygiene Session). Dr. Morris is a member of the A.M.A. Committee on Occupational Dermatoses.

determine whether you were misquoted or your statements were misinterpreted."

In response, they were told that I had neither been misquoted nor misinterpreted, but that I had said that shoe leather could cause a rash in certain people.

Subsequently, a long, threatening letter was received by Registered Mail from A., B., C., and D., attorneys, in which they stated,

"Your clinical observations are at variance with previous findings. . . . We are obliged to request that you take steps to insure that any publication of your observations makes clear their limited scope and their status as a minority view."

They then went on to say that

"In the event that any damage is sustained by our clients, we shall be obliged to institute proceedings against you."

The paper that had been read in Chicago had been accepted for publication by the editor of one of the medical journals. He also received a similar threatening letter from the same lawyers, A., B., C., and D., in which he was warned not to publish the paper. In view of this, he later returned it, stating that this was the first time he had ever had to return a paper to the author after previously accepting it. This, of course, only stimulated my interest in the subject further.

In the course of my researches, I visited the Boston Public Library where I came upon a book which was published in 1923 and which is now out of print.¹ This was a translation of an original German treatise published back in 1891, and it gave the key to the exact chromium chemical for which I was searching—*Basic Chromic Sulfate*. Having digested the information contained in this book, as well as another one detailing the processes involved in shoe leather manufacture,² a return visit was made to the Lawrence Leather Company. The leather chemist at that plant then obtained for me the basic chromic sulfate that is used in most chrome-tanning processes, which never before had been given to a dermatologist. I then set out to test some patients with it who were known to have "shoe leather dermatitis."

About this same time I had under treatment a physical chemist. Knowing of his interest in the subject, we discussed my researches; he volunteered to make up a structural formula showing this basic chromic sulfate so that I could take pictures of it or use it as an exhibit.

Now there came to my attention a paper written by two chemists of the Tanners' Council Laboratory in Cincinnati. In this paper,³ they admitted that some human perspiration could cause the chrome to migrate within the fibers of the leather, and so some people could turn white shoes green by moving this chrome chemical within their shoe leather. It was taken for granted by me that the chemists would ad-

mit that the chrome could thus get out of the shoe and onto the feet, but no, I had to prove that this was happening.

So, a shoe was needed which showed such migration of the chrome. By this time, the structural formula had been completed. It was placed on the air-conditioner in the office. Very soon thereafter there came to the office a 16-year-old blonde girl with pimples. Also, as quite often happens, the mother accompanied her to the office. On one visit, the mother asked, "What is that thing on the air-conditioner?" A brief explanation was made, and she was told that some women could cause their white shoes to turn green. By Serendipity she said "That's a funny thing; I'm a waitress and have to wear white shoes; I can do that in three weeks." So, within a month's time she brought in a pair of green, chrome-discolored shoes.

After that, fortuitously, there came to the office just the type of patients I had hoped to see—tannery workers with rashes from chrome salts used in their work—and, for the first time in medical history, I was able to get positive tests to a basic chromic sulfate with a chemical valence of 3, thus showing it definitely to be a skin sensitizer.

Now, so far as *chemistry* is concerned, the editor of the first medical journal to whom the original paper had been sent told me, after receiving the threatening letter from the lawyers, that my chemistry was "*old-fashioned*." The paper was sent to a second editor, who also stated that my concept of chemistry was "*antiquated*," and had been disproved by more recent investigation. It seemed strange that one reviewer would call it "*old-fashioned*" and another "*antiquated*." At any rate, the second editor suggested that I consult with the leather chemists of the Leather Industries of America at the University of Cincinnati.

In starting up a correspondence with these gentlemen, it immediately turned out that these leather chemists had already seen my paper, it having been referred to them for comment by the editors of the medical journals for their comment as leather experts. In a six-page letter, I was told three times that I was "*confused*," chemically speaking, and was told that Roddy and Lollar had stated that the chromium migrated within the fibers of the shoe and that I must prove that it got out and onto the skin;—that this was not within their province. It took some months of correspondence before I could prove to these leather chemists that not only were my clinical findings accurate and correct, but that my chemistry was far from being antiquated (even though it was based on the 1891 German publication);—it was modern and most unique in its application to the subject at hand. It was a moral victory, then, when the paper, originally submitted to the editor in March of 1956, was finally published, with the ap-

proval of the leather chemists, in November of 1958—two and one half years having gone by.

So, to complete my case, a pair of stockings showing green chrome-discoloration was needed. By analysis of such a stocking, one could prove that the sweat could bring the chrome out of the shoe. The case of the man at Long Island Hospital whom I had cleared of his eruption for the first time in 23 years had become widely publicized throughout the Hospital. Therefore, when a nurse there started having trouble turning her white shoes and her stockings green, she was referred to me and supplied me with the stockings that were needed. Now, this nurse did not have a dermatitis;—she was just turning her stockings green. Chemical analysis proved that her stockings did contain large quantities of the trivalent chromium compound, *basic chromic sulfate*, which had come from her shoes. Herein was proof that human perspiration could leach the chromium out of chrome-tanned shoes and deposit it through the stockings onto the skin, and thus cause "shoe leather dermatitis" in persons sensitive to chromium.

The challenge, then, to me as a dermatologist, had been "You must prove that what you are claiming, based on your clinical findings, is chemically correct." This was accomplished by Serendipity—a combination of unforeseen and unforeseeable circumstances:

A girl with a rash from glue and also a rash from her shoes;

A patient who made glue from chrome trimmings from tanneries—a cause of dermatitis never before mentioned in the medical literature;

A phone call;

A leather chemist who was interested in the subject;

One patient who was a physical chemist;

Another patient's mother who was a waitress who knew she could turn her white shoes green;

Having the structural chemical model in my office at just the right time;

A nurse coming to me with green-discolored stockings when I needed them; and,

Having the help of the leather chemist to isolate the compound, and tannery workers as patients whom I could test with it;—all of these seemingly unrelated circumstances inevitably pointed to something that was indeed sought for but which could never have been found except for Serendipity.

As a result of these researches over a period of about 12 years, it has now for the first time, in the face of all prior evidence to the contrary, been successfully proven that the cause of a most disabling type of skin disease is this one chemical, *basic chromic sulfate*, which is present in most chrome-tanned shoe leather. Leached out of the shoe by perspiration, it travels through the stocking, gets

onto the skin, and causes a constant skin irritation to people who have a sensitivity to chromium. Ever since these findings were published in full in the November 1958 issue of the *A.M.A. Archives of Dermatology*,⁴ confirmatory evidence has been received from other skin specialists, one of whom, by using this chemical as a test material, finally cured a dermatitis in one of his patients that had eluded diagnosis and had persisted for over four years.⁵

Admittedly, out of all the people who wear chrome-tanned shoes, there are not many who suffer from this particular type of skin disease, but to show you how it can affect the individual person, you need only recall the indigent patient in the Long Island Hospital. In all his adult life, he was never able to hold a job because of the unsightly and disabling skin condition—and no one had been able to tell him what was the trouble with him. So he had just kept on wearing leather shoes and leather slippers, and flaring up the eruptions of his skin whenever it would start to fade.

Contrast that case with the last patient who had a rash from his shoes. It took exactly three weeks to clear him up completely, by not letting him wear chrome-tanned shoes, and by bathing his feet in Burow's solution. Three weeks to cure him, while the other man went 23 years without being able to work!

Finally, it has now been proven that the girl who had been seen in 1946 with the rash from the glue and from her shoes was using glue made from chrome trimmings. The glue has been analyzed after all these years, and it has been proven to have the same chemical in it that would have been found in her shoe leather, that is, *basic chromic sulfate*.

It was largely by Serendipity, then, that events permitted the detection of the cause of this disabling type of skin eruption. It is hoped that this work will thus enable myself and other physicians to treat and cure these patients promptly.

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Opinion Survey And Relative Value Study

The following two articles are reprinted from the Bulletin Of The Los Angeles County Medical Association (September 3, 1959). Their publication in Connecticut Medicine continues a series of educational commentaries designed to provide members of the Society with background material which, it is hoped, may be of value to them in responding to the forthcoming "Opinion Survey" and "Relative Value Study" questionnaires.

WRR

Get Out Of The Ivory Tower

Editor's Page

G. W. SHAW, M.D.

Editor

IN an attempt to meet the onslaught of changing socio-economic philosophies as influenced by both labor and government we, in organized medicine, have found our lines of resistance constantly breeched by others who are no less dedicated or zealous than ourselves. These dispensers of medical care accuse the private practitioner of fostering an archaic and inefficient method of dispensing health care.

In spite of our realization that to maintain the status quo is practically impossible, there is too little desire to "roll with the punch," to formulate our own defense, to carry the fight to the public on ideological grounds, not on personal economic grounds.

Instead of a planned defense and offense, some in the profession pretend that there is no problem in the distribution of medical services; that any plan which proposes that we give up one iota of our God-given rights should better be abandoned, even if total engulfment results, that total defeat is better than only partial victory.

The time-consuming studies of those who seek to establish bulwarks to fill the gaps in our—until now—poorly defended positions deserve a better rebuttal than that the defense is not likely to succeed because of its quality and quantity. Or that the penalties of adoption of a unified front in which a Fee Schedule figures is too unattractive to those who feel that they must set fees on the basis of the physician's financial desires rather than on the basis of the patients ability to pay. Insurance is expected to do a lot, but it is quite unrealistic to expect it to convert all employees into well-to-do patients who regard the fee charged as of little moment.

Finally, let's descend from our Ivory Towers and get into the arena to wrestle with the people's problems. We cannot now afford the luxury of indulging in rhetorical skirmishes with hypothetical situations while our defenses are pierced and flanked by those who are filling a vacuum, a vacuum which we have unsuccessfully tried to maintain.

It's Later Than We Think

AARON S. LEVEN, M.D.

ALMOST a dozen years ago when nationalization of medicine seemed imminent, doctors did things they never had done before to beat down the threat. Most of us will remember that organized medicine taxed the membership \$25 per year "for the cause" . . . Doctors boned up on pending legislation, talked to patients about it, devoted themselves to political action, dedicated themselves to building up the Blue Shield, etc.

Today they are no longer doing these things.

We have become complacent, politically vapid and inactive, and many of us have taken the "Oh, what's-the-use" attitude.

We have crept closer to nationalization of medicine than at any time in our Nation's history. It is no longer just around the corner; it is on the corner, right at the curb, awaiting a misguided economic or political misstep! Many of us hate to admit this, and simply shut our eyes to facts.

Medicine today operates under a modified form

of Socialism, and has been during my entire active career of 40 years in medical practice. It has *now* reached but one short step from legislative formality and directive! This may come as news to some of our colleagues who, in their complacency, think that voluntary health insurance schemes are the antidote to so-called "Socialized Medicine." But it hasn't worked out that way; at least I cannot see the "antidote" accomplishing the work it is supposed to accomplish. As I see it (and I have often expressed this thought at various medical meetings), voluntary insurance has conditioned or "brainwashed" many Americans to the idea of "free medicine." And we, the medical profession, are in this thing clear up to our elbows in selling many people the idea of "free medicine."

Just think for a moment. *At the present time over three-fifths of our population have all or part of their medical needs provided for through so-called "fringe benefits."* This, my fellow colleagues, IS "free medicine." The cost—Oh, yes—the tax we say is on industry. The government is an active partner, a co-insurer. The coverage to the recipient and his beneficiaries is free of State and Federal tax! To those who have *full medical and hospital coverage*, the taste is sweet . . . to those with *partial coverage*, the taste is bitter . . . So COMPREHENSIVE INSURANCE IS THE GOAL—THE HUE AND THE CRY!

It does not make much difference to workers whether they get it from their employer or from good old Uncle Sam. Furthermore, it no longer makes much difference to employers either! The argument that Socialized Medicine would impose destructive taxes on industry and on the public is no longer valid. *Industry has already assumed the cost!*

These trends have now put voluntary health plans on the spot. If they deliver what the workers and the public want, they may be able to survive. If they develop any serious weakness, it means an invitation to the Government to assume complete control, whether we, the medical profession, like it or not! Let me point out just three trouble spots, which in my opinion can develop into fatal weaknesses:

- (a) The slowness of both the Blue Shield and the Blue Cross to offer broader benefits and coverage.
- (b) The drive for the MAXIMUM PREMIUM DOLLAR which results in some commercial carriers selling benefits which are not actually feasible.

- (c) The prevalence of "Fee Schedules" which bear no relation to the value of doctors' services or to the entire socio-economic-medical problem as a whole.

Let me go on record now that I am definitely in favor of "Fee Schedules," but fee schedules which not only bear a relation to the value of doctor's services but a value of the entire socio-economic problem in relation to society as a whole. The medical profession is part and parcel of society and cannot be divorced from it.

Now that the voluntary medical plan is of our own creation, what can doctors do to keep VOLUNTARY MEDICAL PLANS from caving in? The answer is simple: just what they did a dozen years ago. They must take the time to learn the facts, time to talk to the buying public, time to talk to our patients, time to support progressive leaders who are more devoted to the public than to opportunism of their own mold! Above all, doctors must dedicate themselves to learn just a little bit more about the humanities and social sciences involved in the art of medical practice and in the art of human relations in the practice of medicine.

If COMPREHENSIVE COVERAGE is the goal—and I have always seen it as such—then the Blue Shield and the Blue Cross should merge once more. They were merged once, you know. By merging, operating costs will be reduced; operating efficiencies improved. Central and combined underwriting, promotion and claims payments will lead to a more cohesive and productive organization. How much can be saved depends upon the speed and effectiveness of the merger.

Radical Therapy? Perhaps . . . But not so radical as to cause us any misgivings. We wish to preserve "Private Medicine" in our country, and as I see it, this may be our last chance for "Private Medicine." We're closer than ever to nationalization of medicine in our own U.S.A. *Over forty nations now have some form of state or socialized medicine.* And as I have pointed out previously, we have had some form of socialized medicine in our own country for the past 40 years that I know of. Thus far, we are the only great power with a semblance of "medical freedom" as we, the American medical profession, like it, proclaim, and enjoy calling it so. Are we destined to follow the path of other nations? Yes, it is really later than we think! There is a lot of work ahead of the medical profession in this sphere.

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More Magic In Words

We all have seen it. With the wise luminous eyes that we have only as children, we have watched them—men, beasts, and wagons—marching into town with much noise and fanfare. With a few poles and some canvas, they promptly fence in a parcel of the earth exclusively reserved for illusion. It is a traveling circus. In the small magic space, defying the laws of physics, jugglers, acrobats, and magicians conjure a vast world of wonder. Time passes. We grow up and become perhaps physicians, perhaps writers. One day we realize that, like the performers in a circus, we too can create a world of illusion. Instead of poles and canvas, we use *words* to fence in a fragment of world, wherein illusion, like the acrobats in a circus, joyously swings through the air.

Animals use sound and motion to communicate. Only man uses sounds and signs—words—as symbols of things, events, and ideas. Words are the most precious “tools with which to make other tools.” To know how to use them is man's greatest attribute. Words are the most dynamic force in medicine. Words are an instrument of healing, of creation, and of communication; of healing, because down the ages they have constituted a powerful curative agent, from the Hippocratic catharses to present-day psychoanalytical dialogue; of creation, because one single new word—such as “pneuma,” “circulation,” “cell,” “antibiosis,” “unconscious”—has often triggered a whole new system of medical philosophy; of communication, because the spoken and the written word—those two most faithful servants of thought—are the wings that permit thought to dart from mind to mind as a bird darts from branch to branch.

In our profession, obscurity in expression, because of the aura of mystery it created, was in times past the anvil on which were hammered iron dogmas that, like lead in a bird's wing, hampered the flight of medical progress. Fortunately, in modern times lucidity has become imperative in scientific language. The lucid style of Osler and Cajal only enhanced the rich content of ideas in their writings, just as the simplicity of the modern sportswoman's clothes enhances her ideal figure.

But there is another quality that is indispensable in making language not only a vehicle of thought but a captivating vehicle as well. We refer to good rhetoric, to the classical “art of good saying.” The fast pace of modern life has killed the two most individual forms of word communication: the epistle and conversation, substituting instead those impersonal rockets—the telegram and the telephone call. The “art of good saying” is also too often sacrificed to the preference for stiff, prosaic, disheveled language, which clothes in drab garments or shapeless bizarre costumes the slender torso of scientific truth. But to degrade the language is to degrade the soul.

Just as an empress is clad in a regal mantle, so must truth be clad in beauty.

It is imperative that we reinstate not only clarity but also beauty to scientific language. A little magic will bring no harm to accuracy; an image or two, a few metaphors, will like jewels add warmth and luster to cold bare facts. Thus can be mellowed the forbidding, the formidable, technical scientific language. Of course, we do not advocate a return to the old rhetoric, adipose and grotesque like the classical soprano, but to a new rhetoric, slim and athletic like a modern opera diva. This new rhetoric would help us to overcome that mental inertia which prevents us from seeing things the way they should be, that is, the way we saw them when we looked at them with a child's eyes, in all that hidden splendor which turns life into a bazaar of wonders.

This new style, already adopted by some publications, is afraid neither of literature nor of humor, and freely borrows from both to acquire charm and grace. Style is thought. One writes as one thinks. Many of our medical predecessors did not fear a style rich in imagery, and their prose was a magnificent Gobelin tapestry.

Let us try, then, to restore not only beauty but also joy to scientific language, using imagery and metaphor in the same manner as a fine jeweler uses tools to polish precious gems. The revival of taste for beautiful prose in science would augur for much good to the future of the *lingua medica*. Until that revival occurs, let those of us who believe in a warm, colorful language, even in science, continue our cheerful crusade. And should anyone remark that our prose wears too bright a tie, let us gently answer that it is not a tie they see but our very spine showing through.

Félix Martí-Ibáñez, M.D.

Reprinted from MD Medical Newsmagazine, Vol. III, February, 1959, with permission of the editor.

Creatures Of Habit

"The only thing one can predict about human nature is that it is unpredictable."

—The Whispering Gallery

Profound knowledge of medical history is not needed to realize that the medical profession, being made up of human beings, naturally has habits. Most of us indeed are creatures of habit and our professional habits are not always based on accurate observation. Curiously enough cults have helped us to realize that some practices current in various eras needed revision. Before the Homeopaths demonstrated that patients often recovered under infinitesimal doses of medicine, there was a period when almost every patient, even those with hemorrhage, was bled, purged and puked. Christian Science showed us that we were paying too little attention

to the psychic aspects of disease, and osteopathy and chiropractic demonstrated that we were not using some forms of desirable physical therapy. Luckily the regular physician can utilize any method or medicine that he conscientiously believes may benefit a patient. It is also commonly observed that a new medical habit is apt to be used too indiscriminately.

Another common mistake is failure to remember that people are all different so that what we regard as normal for all is merely an average, something needed by insurance companies, but which should not be regarded as a norm by physicians. As Dr. Peter Fischer points out in a recent sensible editorial,* our current ideas and practices regarding bowel movements are phony. While there are valid occasions when the bowels should be artificially evacuated; striking changes in bowel habits, fecal impaction, and the use of constipating medicines for example, current medical custom places far too much stress on the desirability of daily evacuations for everybody. As Dr. Fischer points out the once prevalent idea of intestinal autointoxication was scientifically debunked years ago by Walter Alvarez. The man on the street after years of education stressing the necessity of daily bowel movements is naturally alarmed when these do not occur but, no two individuals being alike, there is plenty of evidence that failure of a daily evacuation is consistent with perfect health. There are many healthy people whose bowels move only every few days and some who evacuate only once a week. Let us therefore forget this fetish, not based on scientific observation, and inform the public that daily movements are not essential.

G.B.

* Current Medical Digest, 1957, Vol. 24, p. 46.

The Accelerated Pace Of Medical Discovery And Some Of Its Effects

"The only way to learn is by the labor of the mind in observing, comparing and generalizing."

—WILLIAM GRAHAM SUMNER

No observant physician, particularly one who received his formal training in the nineteenth century, can have failed to note the tremendous acceleration in the pace of medical discovery that has occurred during the first half of the twentieth century. This is well illustrated by the history of a modern medical classic, Goodman and Gilman's "The Pharmacological Basis of Therapeutics."* The preparation of the first edition took two years, the preparation of the second edition, because of the speedy and frequent changes in medical knowledge and the consequent

* Pfizer Spectrum, Jour. Amer. Med. Assn., 1955, 159, 24.

necessity of frequent revision, took eight years. As Dr. Goodman stated: "The task would have been much easier if medicine hadn't crammed a century of discovery into one narrow decade."

One can exemplify what has happened during this still continuing period of rapid medical discovery by the history of the so-called miracle drugs and the antibiotics. At a recent joint annual meeting of the British and Canadian Medical Associations* there was a discussion of these at which various observers commented on their experiences with them. Professor Garrod of Bart's pointed out that the various sulfonamides had similar antibacterial activities, whereas the antibiotics, tetracyclines excepted, were much more selective in character. It was, he said, "difficult for the clinician to keep up with all the new developments, particularly the new dosage forms, there being now 47 different dosage forms of penicillin alone." In using this drug he stated that it is better to have a persistent, even if low, blood level rather than a brief high level. He divided the indications for the antibiotics into the absolute and the conditional. The use of penicillin is specific in scarlet fever, lobar pneumonia, gonorrhea, and syphilis. Streptomycin is effective in tuberculosis and tularemia. Chloramphenicol and the tetracyclines are effective in rickettsial infections. In the conditional group the particular strain of infecting organism may not be sensitive, for example, staphylococci in a hospital environment. The best course in such infections is to use the antibiotic most likely to succeed until bacteriological investigations can be completed. Dr. Garrod emphasized the dangers of indiscriminate therapy: its dangers in undiagnosed patients, nonsusceptible infections, trivial ailments, and as prophylactics. He referred particularly to the expense attending indiscriminate use and to the dangerous side effects.

Dr. T. E. Ray of Toronto noted that bacterial resistance to antibiotics varied in different localities and that inadequate dosage was a common cause of the development of resistant strains. In a children's hospital in Toronto nearly two-thirds of the pathogenic streptococci isolated in 1954 were penicillin-resistant and one third were resistant to streptomycin and the tetracyclines. The development of resistance in many other strains was observed and it was noted that such strains were more likely to appear in hospitals than in private homes. Dr. Ray's solution of the problem of the development of resistant strains was to avoid indiscriminate and prolonged use of antibiotics, to use them in rotation, and to isolate patients with highly resistant strains because they may be carriers.

Dr. Wightman of Toronto stressed the importance of careful examination of patients before prescrib-

ing antibiotics so as to be sure that one is needed, and as a guide to the best choice. The severity of an infection, the accessibility and type of the lesion, the local and general resistance mechanisms, previous reactions to antibiotics, and close coöperation between the physician and the bacteriologist are all important factors in choosing the best drug.

Professor Grofton of Edinburgh summarized the recent work of the Medical Research Council Groups with streptomycin and isoniazid in the treatment of tuberculosis. They found that with effective chemotherapy tubercle bacilli can be eliminated from the sputum in six months without creating resistant forms and most patients can go back to work in 12 to 18 months. They advise doses for patients under 30 years of age of one gram of streptomycin with 100 milligrams of aminosalicylic acid four times daily. In older patients one gram of streptomycin twice weekly with 100 milligrams of isoniazid twice daily and five grams of *p*-aminosalicylic acid two to four times daily is enough. Drug resistance may result if larger doses are given. Treatment should be kept up for nine to 12 months, or, if cavity formation is present, for nine to 12 months after the last positive sputum. Of 107 patients treated over a period of three years, only two deaths occurred, although 31 of the patients had advanced disease. The articles give an excellent summary of the modern drug therapy of infections.

G.B.



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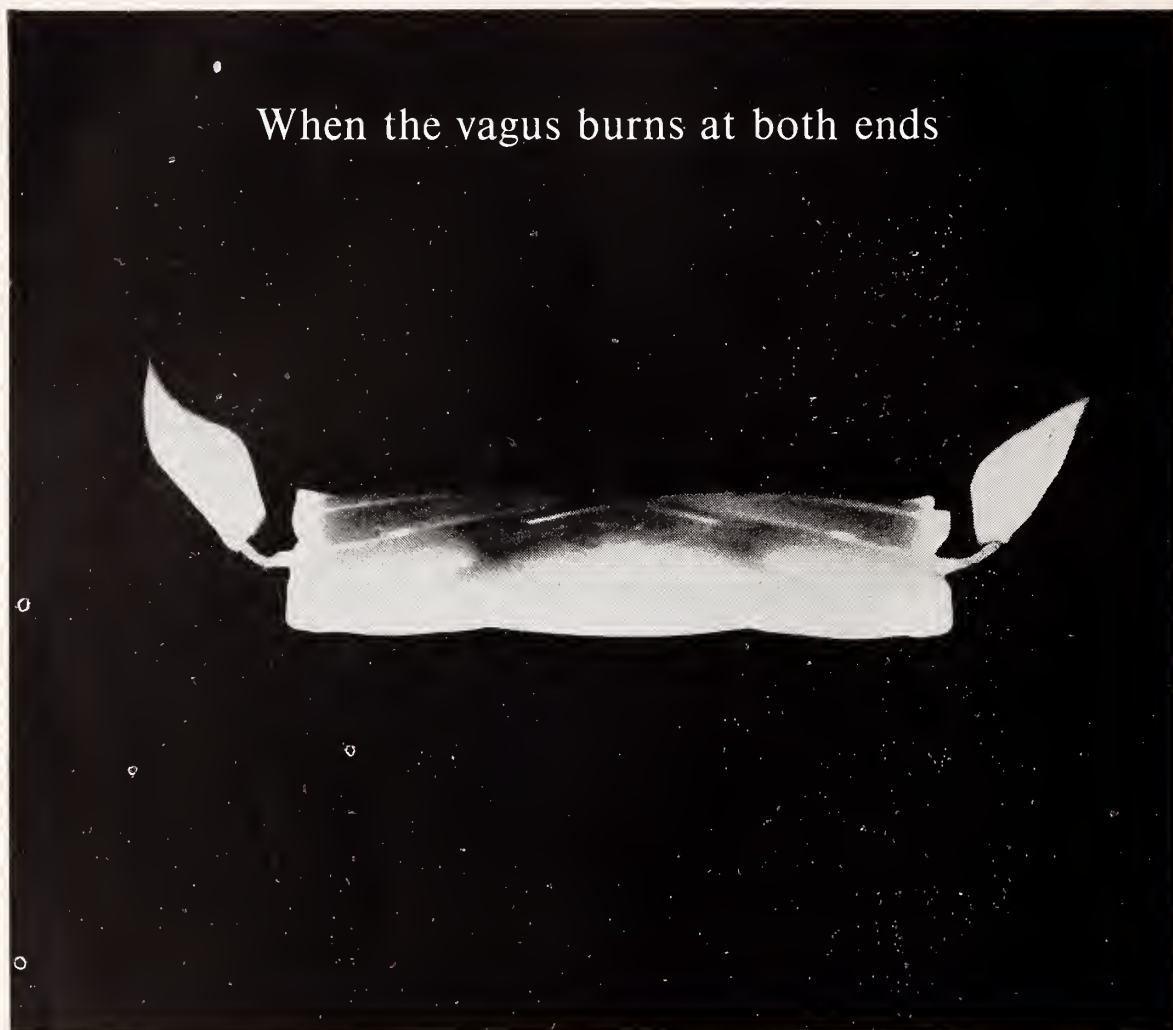
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* Foreign Letters. Jour. Amer. Med. Assn., 1955, 159, 141.

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Pro-Banthine with Dartal contains 15 mg. of Pro-Banthine (brand of propantheline bromide) and 5 mg. of Dartal (brand of thiopropazate dihydrochloride) in each tablet.

Dosage: One tablet three times a day.

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Research in the Service of Medicine.

THE PRESIDENT'S PAGE

GEMS of wisdom, though they be tiny and precious, sometimes convey the wisdom contained in the multitudinous leaves of the largest volume. The following were garnered at a recent national legislative conference and are offered to the members of the Society for their perusal and ponderance.

"There is no doubt that an all-out effort will be made to gain adoption of the Forand Bill at the forthcoming session of Congress."

"Do not become overly pessimistic—nor overly optimistic, either."

"Why can't we continue to take care of the sick and not bother with legislative problems?—Because, first, we are citizens!"

"There are groups with different ideologies from ours who also have the ear of the Congress."

"Education and re-education is necessary for us."

"Like the signers of the Declaration of Independence, we as physicians must continue to fight for our freedom to practice medicine in the American tradition under the free enterprise system."

"What is this day supported by precedence will become precedent tomorrow."

"The State cannot settle the problem."

"Continue to work and to plan."

"You cannot delegate this responsibility to others."

"The individual physician must make his views known to his legislative representatives in the Government."

"It is better to busy yourself at the level at which lawmakers are made, rather than where laws are made."

"Do you realize that 2,069,000 patients are seen by physicians *each day* in the United States?"

"Legislative teamwork with other groups and individuals who think as we do is worthy of being given the priority of our attention and efforts."

"All doctors' wives should become interested in this problem—God bless our Woman's Auxiliary!"

"I have little patience with the doctrine of inevitability—we can and will win if we work as a team."

"Meet the problems of the aged and aging by the activities of citizens on the community level."

"Why isolate the aged into a magical group as we did the Indians?"

"Why do the socializers think only in terms of the pathologic few?"

"The Forand Bill thinks in terms of the past—it is negative—but it is a strong political threat."

"To think in terms of a short-sighted political 'solution' to the problems of the aged is folly."

"Some politicians want a simple 'solution'.—They live and die, politically, in terms of votes."

"The Forand Bill will prove to be extensive, expansive and expensive."

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wherever there is inflammation, swelling, pain

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Streptokinase-Streptodornase Lederle

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By activating fibrinolytic factors VARIDASE shortens the *undesirable phase*, limits necrotic changes due to inflammatory infiltration, and initiates the constructive phase to speed total remission. Medication and body defenses can readily penetrate to the affected site; local tissue is prepared for faster regrowth of cells.

In infection, the fibrin wall is breached while the infection-limiting effect is retained. In acute cases, response is often dramatic. In chronic cases, VARIDASE Buccal Tablets can stimulate a successful response to primary therapy previously considered inadequate or failing.

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Supplied: boxes of 24 and 100 tablets.

1. Innerfield, I.: Clinical report cited with permission
2. Clinical report cited with permission



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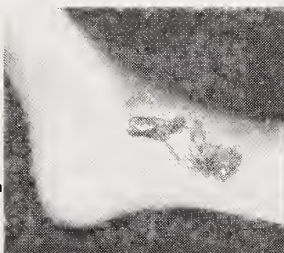
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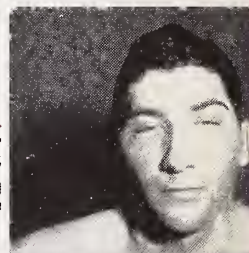
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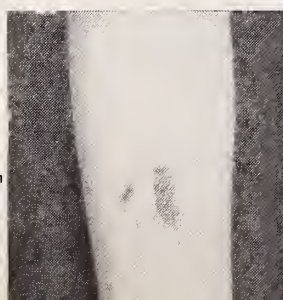
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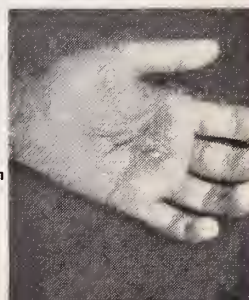
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Assistant to Executive Secretary

COUNCIL MEETING

Saturday, September 26, 1959

A meeting of the Council was held at the Society's building, 160 St. Ronan Street, New Haven on Saturday, September 26, 1959. The meeting was called to order at 2:00 P.M. by the Chairman, Thomas M. Feeney. Present, in addition to the Chairman, were Drs. Blodinger, Buckley, Cornwell, Davis, Kennedy, Murray, O'Connor, Richards and Scully. Absent were Drs. Weise, Gallivan, Goldberg, Carter, Cullen, Gens, Schiavetti, Gilman, Gardner, Metcalf, Chartier, Eddy, Pollock, Grendon, Rentsch and Phillips. A quorum was present.

Dr. Feeney announced that the purposes of this meeting were to review the Society's relationship with Connecticut Medical Service, to report on whatever progress was being made toward the development of a new CMS contract and to seek to determine what recommendations the Council's Liaison Sub-committee should transmit to the CMS Board of Directors with respect to the type of new contract which, in the opinion of the Council, would best serve the interests of the public and the medical profession.

The Chairman stated it had come to his attention, directly and indirectly, that some people seemed to feel that the Medical Society was "dragging its feet" in the matter of formulating a new contract and was thereby impeding progress in that direction.

There was agreement among all Council members present that this was definitely not the case and that such an assumption was unwarranted. Dr. Richards recalled that Dr. Blodinger had reported at the Council meeting of May 14, 1959 that the CMS Executive Committee had unanimously approved a motion, dated May 7, 1959, which directed the CMS Medical Advisory Committee to proceed with the development of a new contract which would provide extended coverage of medical-surgical services and would probably contain major medical provisions as well; that, for the present, specific consideration of Service Benefit income level and payment schedule could be deferred until the median family income in Connecticut had been satisfactorily determined. This action had been taken by the Executive Committee in response to

a directive from the CMS Board, dated March 19, 1959.

After considerable discussion, it was VOTED to request of Dr. Louis F. Middlebrook, President of CMS, Inc., that a report be presented at the next Joint Liaison meeting outlining the progress of the Medical Advisory Committee in the development of a new contract of the type suggested by the CMS Executive Committee.

The inclusion of "major medical" coverage was discussed at some length and there was general agreement that such coverage should be a part of any new CMS contract. From several sources, information has been obtained which strongly suggests that Medical Indemnity of America, Inc., an affiliate of National Blue Shield Medical Care Plans, may be well qualified to provide this service. It was VOTED to request of Dr. Middlebrook, the CMS President, that Mr. Ketchum be invited to meet with representatives of the CMS Board, the Council and the Medical Advisory Committee for the purpose of outlining what his organization could offer CMS in this area.

Dr. Feeney then reported that at the last Joint Liaison meeting on September 10, 1959, it was sensed by the Society's representatives that the CMS Board was most anxious to move ahead with the development of a new contract and that he had been joined by Drs. Weise, Buckley, Davis, Cullen, Gallivan, and Richards in assuring the Board of the Council's recognition of the several urgent needs for a new contract in the very near future and that the Council was very much in favor of taking prompt and constructive action in that direction. He stated that he had also expressed the opinion, however, that progress should be made only on the basis of careful determination of certain essential facts.

The Chairman informed the Council that a sub-committee of the Liaison Group had been directed to seek, and arrive at, a realistic Service Benefit level for a new contract which would be based on the median family income in Connecticut within the CMS definition of "family," and one which would assure that approximately 50 per cent of the Connecticut working population could obtain fully-paid-for coverage of the included services of physicians. He further stated that he was awaiting authorization by the Council (polled by mail on

September 25, 1959) to engage the services of a statistician so that the Society might be better able to assist the CMS Board in determining this median income figure at the earliest possible date.

Dr. Blodinger, Councilor from New Haven County and a member of the CMS Board of Directors, reported that at a meeting held on September 24th, the CMS Executive Committee had been presented with a document titled "Suggested Steps Toward A New Contract." After giving careful consideration to the proposals contained in this document, the Council VOTED to place this matter on the agenda of the next Joint Liaison meeting and to request of Dr. Middlebrook that he outline the mechanisms and procedures by which CMS intends to formulate its next contract.

The Council also instructed the members of the Liaison Subcommittee to offer to the Board of Directors suggestions as to the possible establishment of liaison between the CMS Medical Advisory Committee and the Society's Third Party Payments Committee, the possible interim use of the California Relative Value Scale as a guide in the determination of a payment schedule for a new contract since it may be some time before the results of the Society's Relative Value Study are available, and any other assistance they may be able to contribute toward the development of a sound, realistic, equitable, new contract at the earliest possible time.

The meeting was adjourned at approximately 5:00 P.M., it being understood that the Chairman and the Executive Secretary shall determine the date and time of the next meeting of the Council.

NOTE: The Secretary stipulates that certain matters were discussed by the Council at this meeting which are not in the public domain and, therefore, have not been reported in these published minutes. Any member of the Society has access to the unedited minutes at the Secretary's office.

PLACEMENT WANTED

Friedrich R. Behringer, age 33, M.D. Freiburg, Germany 1952—Allentown Hospital, Allentown, Pa., Ob-Gyn 1954-1956—Lawrence & Memorial Hospital, New London, Ob-Gyn 1959. Specialty—Internal Medicine—Available June 1960.

Josefina Rodriguez, age 30—M.D., Santo Domingo University 1952—Internship Lincoln Hospital, New York City 1953-1954—Residency, Cumberland Hospital, Brooklyn, N. Y. Feb. 17, 1954-June 30, 1955—Specialty—Internal Medicine.

Any member of the Society knowing of opportunities for placement of these physicians is asked to communicate with the Executive Secretary's office, 160 St. Ronan St., New Haven.

SPACE AVAILABLE

Furnished office available in Guilford, Connecticut. Premises previously occupied by general practitioner and internist, said to be promising location for general practice or ENT.

For further information communicate with the Executive Secretary's office, 160 St. Ronan St., New Haven.

Forand-Type Proposal Would Cost \$1 Billion

The government placed a price tag of more than \$1 billion on proposals to offer elderly persons medical and nursing home benefits through the social security system.

In the long-delayed report on programs to assist the aged meet medical bills, the Department of Health, Education and Welfare made no recommendations, merely listing the costs and problems involved.

The report noted that "because both the number and proportion of older persons in the population are increasing, a satisfactory solution to the problem of paying for adequate medical care for the aged will become more rather than less important."

However, the agency declared that "in our society the existence of a problem does not necessarily indicate that action by the federal government is desirable."

The 117-page report figured that hospital benefits of up to 60 days—as in the Forand measure—would cost some \$900 million in 1960. The agency's estimates on nursing home costs ranged from a "very limited" projection of \$14 million a year to an "outside limit" of \$885 million. There was no estimate of what surgical services might cost, but this would be in addition to the other figures.

The agency's estimates compare with the \$1,883,000,000 level that the Health Insurance Association of America has placed on the cost of such a program. The financing of the Forand measure and similar programs would be done through raising social security taxes on employers and employees. HEW estimated that a medical program would require at least a one-half of one per cent increase in the social security payroll levy already scheduled to rise to four and one half percent by 1969.

The report discussed some of the alternatives to social security health insurance that have been proposed by various groups. Again without taking a stand, the HEW outlines plans for federal subsidies to private health insurance companies, government reinsurance of private companies, direct federal help to persons unable to meet medical bills, and expansion of voluntary insurance plans.

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1. Gordon, E. E. and Haas, A.: Industrial Medicine & Surgery 28:217, 1959.

CLINICAL MEDICINE

Acute Fulminating Idiopathic Ulcerative Colitis

A Case Report

SAMUEL SPINNER, M.D.

New Haven

INTRODUCTION

IDIOPATHIC ulcerative colitis is a disease with a wide spectrum of clinical pictures, ranging from the individual with proctosigmoiditis in apparent good health to the other extreme of the patient with acute fulminant colitis who may be literally at death's door with severe toxemia, prostration, malnutrition, anemia, and marked depletion of proteins and electrolytes. In one large series¹ five per cent of ulcerative colitis patients fell into the acute fulminant group. The present report highlights the clinical course of such a patient with the attendant clinical problems in management.

CASE REPORT

This 32 year old female housewife felt well until three weeks before admission to the hospital, when she developed a sudden onset of diarrhea (watery, 20/day, without blood or mucus), accompanied by lower abdominal cramps, "heaviness" in the xiphoid area, and occasional nausea. These symptoms persisted up to the time of entry, and were associated with a 12 pound loss in body weight.

Five days before admission, the patient developed chills and fever, nausea and vomiting, and a rash over all exposed areas of the body.

Treatment had been varied, and involved the use of Chloromycetin® 250 mg q.i.d. for two weeks as well as Probanthine® with phenobarbital; both without benefit.

One day before onset of the present illness patient was severely upset when told that her three year old son had a heart murmur. It required two weeks to determine that the murmur was of no consequence (functional).

No history of foreign travel or the ingestion of either unpasteurized milk or well water.

Three years ago patient experienced a spell of diarrhea for five days when her husband was taken seriously ill.

Examination on entry to the hospital revealed a well-developed and still well-nourished young fe-

male. Temperature 102.8. Pulse 120. A discrete maculo-papular skin eruption, generalized (except for the bathing suit area, hands, and face) and with a follicular distribution was noted. No adenopathy; no hepato-splenomegaly. The abdomen was soft and flat with diffuse tenderness and borborygmi.

Laboratory Data: Urinalysis showed 1+ albumin and 8-12 rbc. The blood count was normal except for an elevated WBC (21,450 with 76 per cent polys). Stools showed a trace of occult blood; no ova or parasites. Stool cultures were negative for pathogens. Blood cultures were negative. NPN and FBS were normal. Total serum protein was 5.42 gm/100 ml with albumin 2.56 and globulin 2.86. The blood electrolytes were normal. The liver function tests were normal.

Proctosigmoidoscopy showed granularity and edema, with friability and petechial hemorrhages starting in the rectal vault. A direct mucus smear was negative for trophozoites.

X-rays: the chest was negative. A flat film of the abdomen showed loops of small bowel filled with gas. A barium enema showed evidence of ulcerative colitis extending from the sigmoid to the cecum.

Course in Hospital: The patient ran a stormy course with fever (spiking from 99 to 104 daily), cramps, and diarrhea four to seven liquid stools per day) for a period of four weeks. Medical therapy included ACTH. This was first given in gel form, intramuscularly, for nine days, in dosage up to 80 units/day. Then ACTH was given intravenously, up to 60 units per day, by drip, over a period of eight hours. The patient was also given blood transfusions (for anemia) and antibiotics (penicillin 600,000 units/day and streptomycin 1.0 gm/day). The skin rash gradually faded and disappeared about 10 days after entry.

On the 19th day of ACTH therapy (the 27th hospital day), when progressive distention of the abdomen developed for five days with accompanying generalized tenderness, it seemed that surgical inter-

vention would be needed. However, the patient still had bowel sounds; liquid stools with flatus continued unchanged; a flat film of the abdomen showed some distention of both the transverse colon and several loops of small bowel; and the blood electrolytes were normal. A surgical consultant felt that there was no clear indication of perforation, and recommended (1) a rectal tube; (2) a Cantor tube; (3) discontinuation of codeine (being given parenterally every four hours, in 30 mg doses, for cramps); and (4) increase of potassium intake even though the serum potassium was normal (to obviate the possibility of ileus from that source). He also recommended that no surgery be done for the underlying disease unless the patient's condition began to "deteriorate."

Within 24 hours there was a dramatic change in the clinical course. The temperature dropped abruptly to normal, and remained "flat." The stools became formed (3-4/day). The abdominal distention cleared. The cramps subsided. The patient started eating well.

Five days later (on the 32nd hospital day) the therapy was shifted from intravenous ACTH (60 units/day) to prednisone (60 mg/day). In the ensuing five days the patient lost 17 pounds of body weight, presumably owing to the excretion of the ACTH-retained salt and water. Antibiotics were discontinued on the 35th hospital day (eight days after the sudden improvement).

The patient was discharged home on the 39th day weighing 140 pounds (20 pounds less than on entry and about 37 pounds less than her weight previous to the onset of her illness).

Follow-up Course: The patient continued to feel well, with 3-4 formed stools per day. Steroid therapy was slowly reduced over a period of many weeks to a level of 15 mg of prednisone per day. A marked gain in body weight to 185 pounds developed, and rounding of face with slight increase in facial hair became apparent.

Recent re-evaluation (4 months after discharge from the hospital) showed a normal temperature; a slightly elevated WBC (12,500) with a relative granulocytopenia (39 per cent polys); serum electrolytes were normal; serum protein was 6.19 gm/100 ml with albumin 2.65 and globulin 3.54; X-ray studies of colon and small bowel showed evidence of persistent widespread ulceration and pseudopolypoidosis involving the entire colon as well as the terminal ileum.

DISCUSSION

The first problem in management was establishing the correct diagnosis. This was relatively simple after the initial hospital investigation was completed. The possibilities of colitis due to *Endameba*

histolytica, bacillary dysentery, or the pseudomembranous type produced by the use of antibiotics, had to be ruled out. The unusual generalized maculopapular skin eruption, which did not appear to be the commonly-described erythema nodosum, was considered an allergic systemic manifestation due either to the disease or one of the drugs being used in treatment at the time. One practical clinical difficulty was the intense emotional reaction exhibited by the patient to every diagnostic procedure, so that it required tact and cajolery over extended periods of time each day to obtain cooperation and consent to everything from venipuncture to sigmoidoscopy and barium enema; initially, the idea of an upper gastro-intestinal series was so firmly rejected that it had to be deferred.

The second management problem lay in the area of blocking or removing all possible provocative or aggravating factors. These included (1) hospitalization (allowing isolation from home and family problems as well as restriction of visitors to husband and mother only); (2) diet (low residue, bland, without raw fruits or vegetables); (3) medication to help block body responses to emotions (e.g. sedatives, antispasmodics and tranquilizers); (4) discussions (with reassurance regarding the course of the disease and the need for various treatments).

The third management problem concerned the maintenance of "homeostasis" by attempting to (1) improve nutritional intake (by frequent small feedings, food cooked at home by mother, parenteral supplementation); (2) decrease nutritional loss through diarrhea (by opiates, antispasmodics, sedatives, absorbents, and bed rest); (3) correct depletions of fluids and electrolytes (by corrective solutions intravenously) and anemia (by blood transfusions); (4) prevent secondary infection, especially while giving steroid therapy (by use of antibiotics).

The fourth clinical problem involved the use of ACTH in an attempt to induce a remission in the underlying disease. The recent literature²⁻⁶ attests to its efficacy in a high percentage of patients with acute fulminant episodes, especially if the disease has existed less than two years.⁴ In the present case, increasing doses of ACTH gel intramuscularly, followed by large doses of intravenous ACTH over a period of 19 days, seemed to have no detectable beneficial effect. The fever, diarrhea, and cramps continued; and abdominal distention was progressive.

Finally, after 19 days of ACTH therapy, a surgical consultant was called in on the basis of the usually-accepted criteria of need for surgery,^{7,8,9} namely, acute fulminant disease not responding to medical measures as well as threatened perforation of the colon (as manifested by the progressive abdominal

distention and tenderness⁸). The surgeon delayed because of lack of clear-cut signs of perforation, and because the general clinical state was not deteriorating. This dilemma has been beautifully expressed by Dukes and Lockhart-Mummery:⁸ ". . . the decision as to when medical treatment must be considered to have failed and surgery is to be undertaken is always a difficult one and requires very careful judgment and cooperation by both physician and surgeon . . . Undue delay can have fatal consequences . . . Abdominal distention is a particularly ominous sign, indicating dilatation and thinning of the colon and incipient perforation . . . It is usually an indication for early surgery though some such patients will get better with medical treatment alone . . . The dangers of steroid therapy have recently been emphasized by Brooke¹⁰ who called attention to the disintegration of the colon that may occur . . . he advocated the cessation of steroid therapy in any patient with this type of disease who shows no response after 1-2 weeks . . ."

Within 24 hours of the decision not to operate in the present case, there was a dramatic, difficult-to-explain recovery. One might be tempted to attribute this change to the emotional relief experienced by the patient when advised by the surgeon that an operation (which she dreaded) was not being planned. Dr. Engel, in a recent panel meeting,⁹ emphasized the psychosomatic aspects of this disease in terms of the patient's "vulnerability to the loss (real or threatened or fancied) of loved or invested persons . . ." Others might wish to relate the improvement to the withdrawal of codeine (which was used liberally and which could have produced ileus). However, it hardly seems likely that the fever and diarrhea would have subsided at exactly the same time. The more likely explanation, to my mind, lies in the natural course of the disease, which does allow for spontaneous remissions.

The next clinical problem involved the maintenance of ACTH and steroid therapy. First, the shift of therapy from intravenous ACTH to the oral steroid, prednisone, was accomplished by the usually-accepted formula² of one mg of prednisone for each unit of ACTH. Thereafter, a daily dose of 60 mg of prednisone was slowly reduced to 15 mg per day without "awakening" the disease. Kirsner and Spencer⁶ described a "threshold level" of steroid dosage below which active disease was manifest, and above which the disease was controlled. The development of the usual steroid effects of slight hirsutism, rounding of face, and a tremendous gain in weight (25 pounds) in the four months after discharge from the hospital, raised the question of when steroid therapy might be discontinued. A variety of opinions appear in the recent literature, varying from "within a reasonable time after con-

trol of acute symptoms"⁵ to "long term (five years plus) or until the following criteria are met: (1) normal sigmoidoscopic exam; (2) improvement by X-ray; (3) normal bowel habits; (4) stool negative for blood; (5) WBC normal; (6) sed rate normal; and (7) no anemia."⁴ In the patient being reported, a follow-up study four months after discharge from the hospital showed that these criteria were not fulfilled even though she felt quite well. Crohn⁷ emphasizes the fact that even during prolonged clinical remissions, a return to normal anatomy of the colon may not occur.

All writers agree that steroids do not cure the disease.^{5,9} Crile and Thomas¹ were so concerned about the likelihood and dangers of recurrence in the acute fulminant cases that they even advocated elective colectomy during a stage of remission!

What is the outlook for such a patient as this who has had a remission after an acute fulminating episode? Flood⁹ reported only four of 20 such cases could remain on medical treatment. Carpenter & Connolly¹¹ reported that medical treatment failed in four out of five patients in this category. In patients on steroid therapy, the dangers of increase in likelihood of occurrence of complications of colitis, as well as complications from steroids themselves, are stressed by others.⁵

Should this patient "exchange her (latent) disease for ileostomy and health"⁷ now, or await the next possible recurrence?

SUMMARY

1. A case of acute fulminating idiopathic ulcerative colitis is reported.
2. The chief difficulty in establishing the diagnosis was the patient's extreme emotional reaction to every proposed procedure of examination.
3. The response to ACTH was problematical, since remission occurred only after 19 days of therapy.
4. The question of when to resort to surgery was debated.
5. The value and dangers of maintenance treatment with steroids was discussed.
6. There is no easy standard by which the clinician can determine when, if ever, steroid therapy may be discontinued.
7. The idea of interval colectomy to eliminate the chance of recurrent, possibly lethal, fulminant episodes would allow the patient to "exchange the disease for ileostomy and health."

85 Trumbull Street, New Haven 10, Connecticut

ACKNOWLEDGMENT

I wish to acknowledge the considerable assistance of two gastroenterologists (Drs. Martin Gordon and

Howard M. Spiro), and a surgeon (Dr. Max Taffel) in the management of this case.

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The Hazard Of Water Enemas

Although the enema has been used for over 2,000 years, the problem of the best enema solution that can be administered is still debated, and opinion will probably continue to be divided.

The plain-water enema is as effective as the tap-water enema to which soap has been added and "is less irritating to the colonic mucosa." But both enemas may involve danger if they are not properly used. "Each of these fluids is hypotonic to the blood-plasma, and their rapid absorption from the colon into the bloodstream results in acute lowering of the osmolarity (total electrolyte concentration) of the blood—a change that is reflected promptly throughout the body-fluids, causing symptoms of 'water intoxication.' . . . The syndrome should be better known."

A barium enema may create the same disorder. Often the barium spreads throughout the whole colon, "and the water then comes into contact with a large absorbing surface." Additional aggravation may occur if water is subsequently used to help evacuate the barium.

Mothers or nurses give water enemas to children with congenital megacolon or chronic constipation of functional origin. Dissatisfied with the result of the first enema, they frequently give a second and even a third one—a repetition replete with dangers.

Some pediatricians advocate use of isotonic saline solution because they think that tap water is too risky. But it has been shown that saline also is not without risk; it may give rise to overhydration, which may lead to general or pulmonary edema.

A recent study concludes that "a single tap-water enema is safe provided that the patient does not have chronic constipation or a condition interfering with water excretion." The difficulty is that "constipation is the condition for which enemas are usually prescribed." If the diagnosis is missed, however, then the argument of those who proscribe tap water gains weight. (*Lancet* 1:559, March 14, 1959.)

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Special Article

Arterial Hypertension Research In The Soviet Union*

SIMONSON and Brojek have just reported on a review of many hundreds of articles published in the Soviet Union on hypertension in the last 20 years. One basic principle runs through all of them. That hypertension is regarded as a cardiovascular neurosis. It is alterations originating in the cerebral cortex that produce first labile and later stable elevation of blood pressure. Renal and cardiac involvement are regarded as secondary although it is recognized that a number of endogenous and exogenous factors may contribute to the development and manifestation of the disease as for example unilateral renal disease.

Not only is hypertension related by Russian investigators to the cerebral cortex but in general, emphasis on the role of the cerebral cortex in normal physiologic regulations and their disturbances in pathologic states is characteristic of recent Soviet literature in all fields of medicine. Cardiac arrhythmias, peptic ulcer, and other internal diseases including certain endocrine disturbances are all considered of cortical origin.

It is pointed out that the inspiration for this attitude goes to Pavlov and his collaborators. Pavlov's original work on conditioned reflexes was essentially limited to salivary and gastric secretion. His successors were inspired by his concept that bodily function is integrated by the central nervous system. They showed that functional pathologic states of the higher parts of the brain, whether by trauma, infection or overstrain of nervous processes and nervous breakdowns, become manifest not only in derangements of the animals external behavior but are accompanied also by various profound changes in the internal medium of the organism, in the functioning of the internal organs, in the vegetative functions, thus embracing the whole organism. It is not surprising therefore with this orientation towards the cerebral cortex that the general theory was applied to hypertension.

All publications in the USSR use the term hypertensive disease which implies that there is a significant difference between "normal" and elevated blood pressure. The Russians do not use the word essential hypertension because it expresses lack of

knowledge of its etiology whereas they believe they are justified as a result of all this work, in considering that hypertension is a distinct clinical entity which arises in the cerebral cortex. Even in the early stages when hypertension first appears they diagnose it as a disease although we in this country are not prepared to qualify it as a disease until the elevation in pressure is clearly and permanently established.

According to Myasnikov the involvement of the cortex is present throughout the entire course of the disease. He divides hypertensive disease into three chronologic stages:

- I Phase a. prodromal
 - " b. transitory increases of arterial pressure
- II " a. labile hypertension
 - " b. stable hypertension
- III " a. sclerotic degeneration compensated
 - " b. sclerotic degeneration decompensated

This author recognizes that cardiac, renal, cerebral or combined organ involvement may occur independently of the chronologic sequence of development. Accordingly, to the special phase of chronologic development is also added such diagnoses as cardiac, neurogenic or nephrogenic.

The Russian investigators have supported their conception of hypertension from the following types of experiments:

(a) By traumatizing the brain of animals with electrical, or chemical stimulation, by applying trauma and producing pathology in the cortex.

(b) By experimental functional disturbances in animals as for example by conflicting conditioned signals leading to a neurosis and hypertension.

(c) By showing a disproportionately high incidence of psychic stress and emotional trauma in individuals who develop essential hypertension.

(d) By demonstrating C.N.S. disturbances in the early phases of hypertension, by means of the electroencephalogram.

In this country there has been an extensive search for humoral substances of renal and hepatic origin which may play a primary role. Sodium absorption by arterioles, and even enzymatic abnor-

* Russian Research on Arterial Hypertension. Simonson, Ernst, and Brozek, Joseph, *Ann. Int. Med.* 50, 129-193, 1959.

malities in the disposal of nor-adrenalin has been studied. In the Soviet Union renal involvement is considered to be a late development. They believe spasm of renal arterioles is the first factor which reduces renal blood flow and they have been able to substantially increase renal circulation by such substances as decholin and nicotinic acid in the early phases. They have also searched for pressor substances extensively and found them in blood and spinal fluid just as has been described in this country. As a result although renal and humoral factors are considered to be secondary nevertheless their functional significance in the development and maintenance of hypertension is clearly recognized.

As a result of their point of view their therapeutic approach has developed some novel features. To be sure they employ ganglionic blocking agents, reserpine and even sympathectomy much as we do and they treat cardiac failure and other clinical complications much as we do. But because of their orientation to the cerebral cortex they emphasize certain novel aspects which we do not.

Psychotherapy is recognized as an obligatory component in all forms of medical therapy. Strong cortical excitation resulting from stressful like experiences are believed to play a dominant role in pathogenesis. Therefore the Russian clinician seeks to reduce or eliminate the various stresses and emotional overactivity of patients and uses the electroencephalogram much more than we do to predict the value of a therapeutic measure.

Sedatives like bromides, barbiturates and chloral hydrate are used extensively. The "excitatory" types are given phenobarbital. The inhibitory types receive chloral hydrate.

Sleep therapy is used systematically. Sedatives are given to produce 14-16 hours of sleep every day for 2 weeks. Hypnotically induced sleep in two sessions daily for 6-8 days are routinely employed. A fairly immediate clinical improvement has been frequently reported which outlast the period of

treatment by many months. This method has been found successful in over 50 per cent of early cases. Of course the success of this therapy is considered to support the concept of the cortical origin of hypertension.

Industrial outpatient clinics are organized to create living conditions which are calculated to reduce temporarily the stresses of life of the sufferers. They are obliged to avoid heavy physical work, assembly work carried out at great speeds. Also work associated with severe mental strain and great responsibility. Interruption in work routine in the form of rest pauses are introduced for therapeutic reasons. Night work is disallowed so is overtime. Smoking is strictly prohibited. The meals are served with reduced fat, salt and water intake.

However strange excesses crop up here and there. Attempts have been directed to blocking the neurovascular bundles around the temporal arteries for patients with troublesome cerebral symptoms. Novocain injection in several zones of the scalp. Novocain injection around the carotid sinus. Paravertebral novocain block. Finally oxygen inhalations 50-65 per cent for 1½ hours a day for two weeks have been reported to improve cerebral symptoms strikingly but have little effect on the blood pressure.

We are indebted to Russian authors for the re-examination and recognition of the role of the cortex in hypertensive disease. Their work appears to be of theoretic as well as clinical and diagnostic value. Even if it should turn out as we think that the cortical influences are secondary just as they think renal and humoral influences are secondary, it will still have focused attention to an important organ, the brain, about which much remains to be learned in physiology and pharmacology as well as in medicine. Doctors Simonson and Brojek have done a valuable service to American physicians and perhaps to our Russian Counterparts by bringing the Russian point of view in clear focus.

L. H. NAHUM, M.D.



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(1) Estimate based on epidemiologic study by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122, Jan. 1933.



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Around The State

Middlesex County

Donald Arnault, Louis LeBella and Alfred Sweet attended the annual meeting of the American College of Surgeons in Atlantic City last month.

Desmond DeVille, who just completed his training at Hartford Hospital, has joined the anesthesia staff at the Middlesex Memorial Hospital.

Two interns began their tours of duty at the Middlesex Hospital last month. They are John Peden, a graduate of the Edinburgh University Medical College in Scotland and Jose Anain, a graduate of Cordoba University School of Medicine in Argentina.

Norman Gardner spoke at a Conference on Rural Health at Storrs and Christie McLeod spoke at the meeting of the College of American Pathologists recently.

Hartford County

Candidates for full membership at Hartford County's 167th semi-annual meeting on September 23rd were John Basile, Wayne Ross, Christian Creteur, James Smith, George R. Dalton, John Felber, Egidio Fulchiero, Harold Knight, John Geoghegan, David Whitehead, John Vecchiolla, Robert Painter, and Paul Graffagnino, all of Hartford.

Also Irwin Becker, Herbert Glass and Jacob Wachtel of Bristol, John Hill and Russell Bower of New Britain, Harry Wood of West Hartford, Aldo Bellucci of East Hartford, Sagar Sikand of Willimantic, Desmond McGann, South Windsor; Peter Gram, Manchester; Ambrose Alfonsi of Southington; John Britting, Bloomfield, and Gerald Burke of Windsor Locks.

William B. Scoville left early this month for his annual European trip. While abroad he will work in northern Italy and attend the World Congress in neuro-surgery.

Vincent J. Squillacote of New Britain has received an interim appointment to the health board, succeeding Paul D. Rosahn. Named as assistant medical examiner of New Britain was Raymond T. Wise. He will assist John Tokarczyk.

Peter J. Scafarello has been appointed to two national committees of the American Academy of General Practice. He was appointed as a member of the Council of the Section of General Practice of the Pan American Medical Association which will hold its annual meeting in Mexico City next year.

Dr. Scafarello's second appointment was as a member of the insurance committee for the American Academy.

New physician son of a Hartford County physician is Malcom S. Roth. He is the son of Frank S. Roth.

New applicants for provisory membership were Robert Huszar, Lois Marshall, Edmond Alfille, Mark Josel, Meade Luby, Allan Ainley, Gerald Baker, David Babbott, George Bowers, Thomas Crotty, Alden Harned, Anastasios George, Ernest Henken, Ibrahim Orgun, Bruce Marshall, William Zeller, Peyton Mead, Sam Pinkes, and Arthur Wolf, all of Hartford.

Chester Bernstein and William Giertz of New Britain have also applied for provisory membership.

New Haven County

Francis D. W. Lukens, Professor of Medicine at the University of Pennsylvania and currently president of the American Diabetes Association, will be the guest of the Connecticut Diabetes Association on Wednesday, November 18, inaugurating Diabetes Week in Connecticut.

Dr. Lukens will address the New Haven Medical Association in the evening at 8:15. His topic will be "Assessment of Action of the Sulfonylureas."

The Doctor's Office

Robert T. Cassell, M.D., announces the opening of an office for the practice of internal medicine at 32 Imperial Avenue, Westport.

Robert Cavallaro, M.D., announces the opening of an office for the practice of general surgery at 2660 Main Street, Bridgeport.

James K. Filan, M.D., announces the removal of his office for the practice of general medicine, from 46 Atwater Avenue to 272 Main Street, Derby.

Daniel G. Fischer, M.D., announces the opening of an office for the practice of general medicine at 18 Helen Street, Hamden.

James D. Garrity, M.D., announces the opening of an office for the practice of general medicine in association with Dr. Edward R. Harvey at 119 Main Street, Seymour.

Antonio Graziano, M.D., announces the opening of an office for the practice of general medicine at 158 Dixwell Avenue, New Haven.

Rafi Tofig, M.D., announces the opening of an office for the practice of general medicine at 175 Grand Avenue, New Haven.

Charles H. Rosenberg, M.D., announces the removal of his office for the practice of otolaryngology, from 107 Glenbrook Road to 810 Bedford Street, Stamford.

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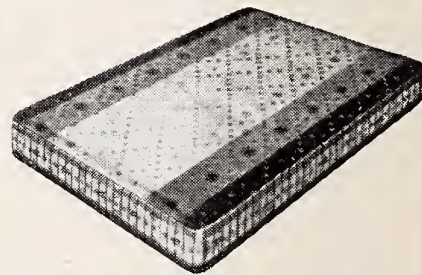
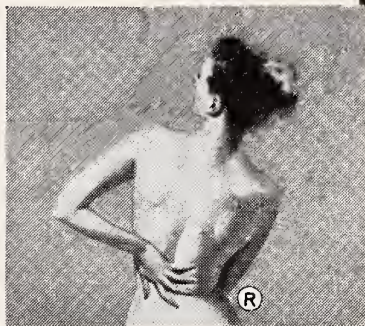
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Over Use Of Hospitals

The Health Information Foundation of New York has announced a \$200,000 study of hospital admissions to be conducted by the National Opinion Research Center of Chicago and the foundation.

A two and one-half year study of admissions to Massachusetts hospitals to ascertain the non-medical as well as the medical reasons for hospitalization.

The proposed research study is given below.

The last two decades have witnessed major changes in the patterns of hospital utilization. Almost two-thirds of the population now have some protection against hospital costs through Blue Cross plans or private insurance contracts. In 1940, fewer than 10 per cent had such protection. During the same period, the admission rate to general hospitals has more than doubled. Coincidentally, with the development of more effective medicines and the trend toward early ambulation, there has been a sharp reduction in the average length of hospital stay.

But in spite of a shorter average length of stay, both the cost per patient and the cost per day have approximately doubled in little more than 10 years. As a result of these sharply rising hospital costs, and of the steadily mounting admission rate, hospital insurance has had no recourse but to raise subscriber premiums. There is thus presently much concern that voluntary health insurance must soon "price itself out of the market."

Allegations have been made that "overuse" or "abuse" of hospital insurance by both patients and doctors has in itself contributed substantially to the rising costs which now so bedevil the insurance plans. It is argued that many patients who do not really require hospitalization are nevertheless placed in hospitals, or their stay is extended, purely for their own convenience or that of the doctor, because the hospital charges are covered by insurance. It is said that doctors often hospitalize insured patients for diagnostic tests which could be performed just as well outside of a hospital, but the truth is that facts are not known.

In consequence, a number of research efforts have been and are being made to ascertain the degree of overuse of hospital facilities. In one study a sample of hospital case records was transcribed and presented to a panel of eminent physicians for evaluation. Another research team is collecting pairs of cases hospitalized by the same physician for the same condition, but who differ substantially in the length of their hospital stay—and is then asking the doctor to account for the difference. Perhaps the most ambitious attempt is currently getting under

way in Michigan, where medical criteria for hospital admission and discharge for selected major diagnoses have been agreed upon by panels of physician-specialists. It is next planned to sample hospital records to ascertain the proportion of admissions and discharges which failed to meet these criteria, and then to interview the physicians concerned with these deviant cases in an effort to understand the factors.

But aside from such problems as size and representativeness of the samples, the competence of small panels of doctors to speak for the total medical profession and the difficulty of judging otherwise unknown cases solely from clinical records, the value of all these approaches is sharply limited by a lack of consensus as to just what constitutes "overuse" of hospital facilities. Even if it were found that large numbers of hospitalizations fail to meet the medical criteria, and that the attending physicians were often guided by non-medical considerations, the question remains: Is this a proper or improper use of hospital facilities?

It is generally conceded that the overwhelming majority of hospital admissions are required for legitimate medical reasons, and it is equally conceded that there will inevitably be occasional instances of flagrant abuse of insurance. But between these extremes, there is a large area in which individual judgment must necessarily play a part. In deciding whether or not to hospitalize a patient at a particular time, the physician's decision will very often be affected not only by the medical circumstances of the case, but also by a host of personal and social factors. Among these are the doctor's own habits, beliefs, experiences and predispositions; the quality and accessibility of hospital facilities or of alternative facilities outside the hospital; the patient's own attitudes toward hospitalization, his home and job situation, his ability to meet hospital costs, etc. The same non-medical factors will also, in many cases, affect or even determine the patient's length of stay and the date of his discharge.

The extent to which hospitals are considered to be "overused" or insurance benefits to be "abused" ultimately depends, therefore, upon one's definition of the role and function of the hospital. If, at one extreme, the hospital is regarded as a "life-saving" institution, to be employed only when other alternatives have failed, one is likely to find today a great deal of "overuse." If, on the other hand, the hospital is regarded as a community facility to be utilized whenever its services can help provide better medical care than could be obtained outside, the amount of "overuse" one finds is likely to decline very sharply.

Before there can be any meaningful measure of the amount of "overuse" of hospitals, much better and fuller information is required concerning the ways in which hospitals are actually used today and the needs which they serve. It is evident that, for a variety of reasons, the hospital today plays a different role from the one it played 20 years ago. Public attitudes toward hospitalization have changed; physicians' attitudes and practices with respect to hospitalization have similarly undergone changes; and hospitals themselves are in constant evolution. At present, we know very little about the extent to which non-medical considerations actually affect hospital admission and discharge. What is needed is to examine a representative group of hospital cases, and to reconstruct the chain of events and decisions which led to their admission and discharge. Such an approach requires interviews not only with the attending physicians, but also with patients themselves.

A study of this type is proposed below. It would be primarily descriptive rather than evaluative. It would aim to supply the insistent need for information on the present role and function of the hospital and for systematic data on the factors affecting hospitalization decisions. It would not attempt to define the amount of "overuse" nor to set standards for hospital utilization. But the facts it discloses should improve and sharpen present concepts of what a hospital is for.

THE STUDY

The study will be conducted in the State of Massachusetts. (A national survey of equivalent scope and depth would pose difficult methodological problems and would be extremely costly.) While the Massachusetts findings will not necessarily apply in detail to other states, the diversity of that State (with respect to insurance coverage, demographic characteristics of the population, composition of the medical profession, etc.) should provide data which can be readily generalized to most other areas. More important, the Massachusetts Medical Society, the Massachusetts Hospital Association and the Massachusetts Blue Cross have all expressed their interest and promised cooperation to HIF and NORC in any study of the type proposed. Such assurances of cooperation from the professional bodies concerned are indispensable to the execution of the study as planned.

I

The sample of cases to be studied will be a random selection of approximately 2,500 non-obstetrical admissions to a cross-section of general hospitals in the state. (Welfare cases and other categories of free patients will be excluded from the analysis.) The sampling will be conducted periodically over a 12-month period, so that the selected cases can be

studied at an early date after discharge, while the circumstances of their hospitalization are still fresh in mind. The hospital records will provide information on the type of admission (medical vs. surgical), diagnosis, name of physician, length of stay, hospital services received, type of accommodation, type of hospital, source of payment, etc.

Each of the 2,500 cases will then be personally interviewed in an effort to reconstruct the chain of events which led to the hospitalization. The patient will be asked to describe the onset and circumstances of the illness or injury, the amount and kinds of medical care received prior to hospitalization, his evaluation of the need for hospitalization or surgery, and the basis for any indecision which may have existed on his part or that of the doctor. Similar questions will deal with his use of hospital services and his length of stay. Additionally, he will be questioned about his former experience, if any, with hospitals, his attitudes toward them, and (where surgery was performed) his feelings about the surgical treatment of disease. The interviewer will elicit all relevant information about the patient's community and home environment, job situation and other factors which may have affected the hospitalization decision. In certain cases (e.g., where the patient is a child, or where there was disagreement in the family about the need for hospitalization), other family members will also be interviewed. The patient will finally be asked for details about his insurance coverage, if any, and for his experience with and attitudes toward hospital prepayment plans.

Following the interview with the patient (and, where indicated, other family members), the hospitalizing doctor will be personally interviewed. The doctor will, of course, be given no information about the patient's attitudes and impressions, but will rather be asked to supply an independent account of the chain of events and decisions which resulted in the hospitalization. Extensive efforts will be made to ascertain the relevance of various non-medical considerations and to assess the impact which each of these may have had. Equal attention will be given to the possible alternatives to hospitalization which were available to the doctor. The physician will be questioned about his prior experience with and knowledge of the patient, the circumstances under which he was called into the case, and the points at which hospitalization was first considered and finally decided on. He will be asked to state his own impressions of the patient's attitudes, home environment, job situation, insurance coverage, etc.; to describe the availability of alternatives to hospitalization, his own attitudes toward the use of hospitals and surgery, and his usual practice with similar cases in the past; and to reveal his perceptions of and attitudes toward the hospital's per-

sonnel and facilities. Additional information will be elicited concerning the size and nature of the doctor's practice, his age, income, access to hospitals, etc. Because of the clustering of the sample, some doctors will be responsible for more than one of the selected cases. In such instances, it will be possible to cover more than one hospitalization during the same interview; or if additional interviews are necessary at later dates, they can be restricted to the particular case under consideration, since the more general information will already have been obtained. On the other hand, it may often be desirable to interview more than one doctor with respect to a single case, if the patient was referred from one to another and neither one alone can give a full account of the circumstances.

II

The information derived from such interviews—with a representative sample of hospitalized persons over the course of a year, and with the physicians who hospitalized them—will fill a large gap in our understanding of the functions which hospitals actually serve today. Decisions to utilize the services of a hospital are presumably based on a mixture of personal, social and medical factors. The proposed study will tell us more precisely the exact composition of the "mix," and how it varies in different circumstances. Once that is known, and we have a better understanding of all the needs which the hospital serves today, we can more intelligently seek a measure of agreement on the needs which the hospital should serve.

The study as described takes a cross-sectional approach to the problems of hospital utilization today. Its objective is to collect detailed descriptive data concerning a representative sample of hospital admissions during the course of a year. Inherent in this cross-sectional approach is the possibility of finding that medical considerations are the sole determinant of the vast majority of hospitalizations, with non-medical factors only rarely playing a part. If we now knew this actually to be the case, a more fruitful approach would be to concentrate on the small minority of hospital patients for whom the non-medical factors were compelling, so that these could be more fully described and understood. This has been the approach of certain other studies, which have tried to select for study only those hospital records which do not seem to conform to particular medical criteria.

We have deliberately rejected this approach, however, for the following reasons: First, if our study does no more than show that medical considerations are controlling in 98 per cent of hospitalization decisions, we will still have performed a great service. The degree to which they are controlling is presently a matter of some dispute, and

the facts can be established only through a cross-sectional approach of the type we propose. Secondly, it may be doubted that personal and social factors actually play such an insignificant role. They must frequently affect, even though they do not determine, a great many hospital decisions; and even when they are irrelevant to the hospital admission, they may be an important determinant of the patient's length of stay. Finally, since in many ways this study will be breaking new ground, we aim to keep our procedures flexible. If in our exploratory work it begins to appear that we are getting too few cases of really productive interviews, the design can be altered to draw a larger number of cases for the basic cross-section, but to concentrate the bulk of the detailed interviewing among the minority in which non-medical factors play a substantial part.

A control group of non-hospitalized cases, however, can be obtained only by matching cases from doctors' records, or by periodically screening a large sample of the public, and then conducting interviews with those for whom hospitalization is at any time considered. The latter approach would require such a large sample in order to provide sufficient relevant cases that the design cannot be regarded as efficient. The matching of hospitalized cases with non-hospitalized who are equivalent with respect to age, sex and medical diagnosis has certain methodological weaknesses and also poses formidable problems of doctor cooperation. The possibility should not be ruled out altogether, however, without further exploration of its feasibility and possible advantages. If found practical, such a procedure could be readily incorporated into the design of the study, and its extra costs largely offset by savings elsewhere.

We would otherwise hope to ameliorate if not solve the control problem in two ways. First, a proportion of our sample cases will have been hospitalized only after some delay. Hospitalization may have been considered, and then postponed, for days, weeks or even months prior to the actual admission. The factors responsible for the postponement of hospitalization in such cases should throw some light on the factors operating in any control group of persons who were never hospitalized. Secondly, we propose an additional sample of approximately 1,500 interviews with a representative cross-section of the total adult public of Massachusetts. Such a sample will not be medically comparable with our hospitalized cases, but it will serve a number of important purposes. It will contain some proportion of individuals for whom hospitalization was at one time considered but not resorted to, and thus provide some semblance of the ideal control group, although a small and limited one. It will enable us to compare our sample of hospitalized persons with

the general public, with respect to such variables as insurance coverage, age, sex, income, type of community, and general attitudes toward health and medical care. And it will provide an opportunity to question the general public about their opinions with respect to hospitals and hospital utilization today.

It would additionally be desirable to interview a small but representative cross-section of all practicing physicians in Massachusetts to ascertain how they use hospitals and why, how they perceive hospital utilization by other doctors, and what they conceive to be the proper function of the hospital today. The doctors to be interviewed concerning the sample of hospital cases are, by definition, unrepresentative of the total profession since the probability of their selection is proportionate to the number of cases they hospitalize during the year. Further consideration will be given to the relative usefulness of this supplementary interviewing, but it is not definitely proposed here because our study is already an ambitious one, time and funds are not unlimited, and it does not now seem crucial to our central objective of describing how hospitals are used today.

Finally, to aid our understanding of the problems in this area and to improve and refine our interpretation of the results of the study, we propose to interview, in some depth, approximately 50 hospital administrators in the State. These would be broadly representative of the various sizes and types of hospitals in Massachusetts, and should provide us with a sound basis for describing the hospital's outlook on these problems, thus complementing our data from doctors and patients.

International Health Hearings

It will be surprising if the PPHF enterprise does not receive some attention at public hearings opening on another aspect of international assistance and cooperation in field of health. Well over half of Senate membership is behind S. J. Res. 41, the bipartisan plan for a National Institute for International Medical Research, which will be taken up by Senate cosponsors, Democratic Senators Hill and Humphrey are the prime movers. The hospital ship idea originated with Eisenhower supporters in medicine and big business.

The four days of public hearings before Senator Hill's subcommittee on health legislation which has featured testimony by nationally known figures. They include Drs. I. S. Ravdin, Paul D. White, Howard A. Rusk, Sidney Farber, Frederick Stare, Cornelius P. Rhoads, Ross T. McIntire and Martha Eliot. Also Basil O'Connor, president of National Foundation; General Omar Bradley, Detlev Bronk, Leo Cherne and others.

Medical Service Relative Value Studies Explained

A system for establishing the relative values of all types of medical services performed by physicians is now being outlined to state medical societies by the American Medical Association.

The system is based upon one originated in California several years ago. Its aim is to provide uniformity in measuring value of services.

It involves a study to show—by some numerical designation other than money value—relationships between time, competence, effort, expense and other factors required to perform one professional service as compared with those required for other professional services.

Once these values are established they can be used for various purposes. One of their chief uses will be to help health insurance and prepayment plans set up benefit schedules that "bear a more constant, relationship percentagewise to the actual, usual or customary fees of physicians," according to a report in the current A.M.A. Journal. Another use will be to help the physician explain to his patients the basis on which charges are made for his particular services.

The A.M.A. Committee on Medical Practices, at the direction of the A.M.A.'s policy-making body, the House of Delegates, has prepared several publications on relative value studies. The committee held its first regional meeting in San Francisco to explain to state societies the advantages of conducting their own relative value studies.

It is the recommendation of the House of Delegates that such studies be carried out on a statewide basis rather than a nationwide basis.

A relative value study involves two elements, the Journal report said. They are a comprehensive survey of the relationships between the usual charges made by members of a specific association for professional services, and a statistical evaluation resulting from the assignment of a unit value for the various procedures.

The California Medical Association's pioneering study was adopted in 1956 after three years of committee work. It was updated and republished in late 1957, and is currently being revised. It has been used by Kansas, Iowa, and Utah as a model for their own studies. Several other states are now considering making similar studies. The relative value study as adopted by California is divided into four parts and contains separate schedules for surgery, pathology, radiology, and other medical services.

In Fewer Words

Accidental discovery at National Institutes of Health of anti-gout properties of the drug zoxazolamine has led to enlarged and more intensive trials in patients at Clinical Center of NIH. . . . Federal Trade Commission has dropped its complaint; against Federal Life and Casualty Co., Battle Creek, Mich., on advertising of health insurance policies. . . . Defense Dept. has authorized retirement point credits to Medical Corps Reserves who attend scientific sessions of Aero Medical Association in Los Angeles next April 27-29.

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whole menopause, (and how else is it to be treated?), let your choice be "Premarin," a complete natural estrogen complex.

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Book Reviews

CENTAUR. Essays on the History of Medical Ideas. By Felix Marti-Ibanez, M.D. M.D. Publications Inc., New York. 736 pp. \$6.00.

Reviewed by LOUIS H. NAHUM

The author is Professor and Director of the Department of the History of Medicine, New York Medical College and Editor-in-Chief of M.D. Medical News magazine

This vast and colorful presentation is written by a psychiatrist, a historian, a poetic writer, publisher and soldier all in one great personality. As one reads along the fascinating pages we find them inspired by a great soul who is one of the foremost exponents of medical humanism. The author believes in the words of Sir. Wm. Osler that "History is the biography of the minds of men."

The author has derived his title from the divine Centaur of Greek mythology who taught Aesculapius art and medicine and goes on to say "Never in my life have I seen the Centaur; but I have heard the rushing gallop of his cloven hooves upon the marble floors of universities and medical schools in the long silent halls and pain filled rooms of clinics and hospitals, in the still, white mystery of laboratories, on the solitary roads travelled by the country doctor, on the battlefields once the cannons have been silenced, and in the hushed peace of libraries where the gilded spines on ancient volumes embroider the walls with a tapestry of centuries and dreams. May these pages go forth across the golden fields of this hospitable land of hope, to which I owe so much under the sign of the divine Centaur, who, besides medicine taught Aesculapius the "love of man for man," to which this reviewer says amen.

There are 66 papers divided into 8 sections. The first deals with medical humanities; books in the physicians life; Minerva and Aesculapius—the physician as a writer.

The second group called the Tapestry of History, consists of 18 papers on a variety of subjects as diverse as the Artist as Physician, Wm. Harvey as a restless student in gay Padua; the turbulent world of artist-physician in the Renaissance; the history of endocrinology; a history of medical thought; medical geography and history and the history of neurology and ophthalmology.

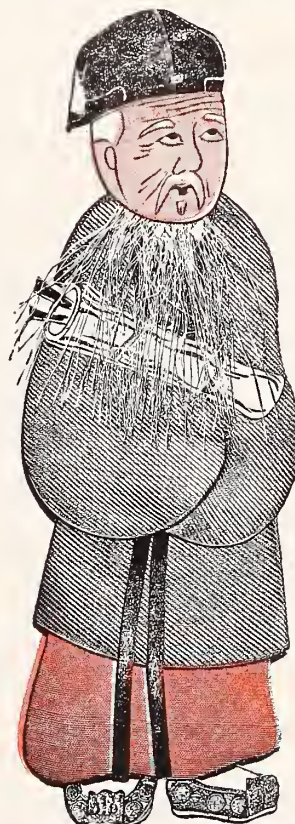
A third section is devoted to the Philosophy of Medicine in which hibernation, motion sickness, a search for the nature of disease and other topics are covered.

A charming fourth section is devoted to a new concept of medical journalism and words and research.

A fifth section is called the Mirror of Psychiatry and takes up the historical and philosophic background. The Quest for Freud and the Challenge of bio- and chemotherapy in psychiatry.

A sixth section takes up Christmas and Neuroses, the Psychology of Symbolism in Oriental Rugs, Symbols and Life, and on the Psychology of Chess.

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A seventh section is devoted to the artists world. The strange world of artists like Leonardo, Picasso, Braque, Modigliani and Utrillo and the Theatre in our Age of Anxiety.

The Eighth and final section consists of 24 intriguing Editorials from M.D. Medical News magazine.

The book is unique in that it contains concepts of importance to anyone interested not only in the history of Medicine, Art, Sociology and Psychology, but also a "close up of the fabric of dreams and ideas which make up the mind of a man."

Who should read this book—everyone. It is so rewarding and is so kaleidoscopic in scope that it offers a beginning for a real education in medical ideas. If one wishes to be learned in medical ideas this is the book to begin with.

ESSENTIALS OF THERAPEUTIC NUTRITION. By Solomon Garb, M.D. Springer Publishing Company, New York, New York. 147 pp. \$2.00.

Reviewed by ROBERT R. LEVIN

This is a simple manual on nutrition. Dr. Garb presents the elementary facts in simple lucid fashion, so that it is understandable without any profound scientific background. He has avoided controversy and has omitted a verbose bibliography. That it was directed towards the education of the nurse will in no way detract from its value to the practicing physician.

The book is divided into three parts: the first, on the principles of nutrition; the second, on therapeutic diets; and the third part contains quick reference tables.

It is appropriate to quote several gems from Part one.

"A small amount of unsaturated fats is essential for normal nutrition. Although our knowledge of this area is far from complete, it appears that the unsaturated fatty acids act somewhat like vitamins."

"The limited storage of body protein is of great importance in the management of patients after surgery or in the presence of infection. Wound healing and recovery do not proceed at maximum rate unless adequate protein is available and the body stores are not enough for these purposes. Extra protein must be supplied in the diet. If this is not done, wound healing and recovery may be slowed considerably."

In discussing dietary deficiencies, he states, "In most cases, they result not from poverty but from ignorance, or poor eating habits. They are found in all walks of life."

"Although vitamin pills may be able to relieve the avitaminoses, they cannot take the place of the other missing nutrients."

"An excess of calories leads to obesity which is reported to reduce life expectancy. However, there is reason to believe that the evidence for the reduction in life expectancy in obesity is related not so much to the degree of obesity as to the kind of nutrient which caused it. Some scientists believe that obesity caused by excess fat intake is much more likely to cause trouble than that caused by excess carbohydrate intake." In other words, Dr. Garb does not lump obesity into a single entity, but relates it to the causative factors.

The astute physician will want to keep this little book handy, on his desk or in his pocket.

TRAUMA. By Harrison L. McLaughlin, M.D. W. B. Saunders Company, Philadelphia, Pa., 784 pp. \$18.00.

Reviewed by DENIS S. O'CONNOR

The use of the simple word "Trauma" as the title for this book is appropriate for several reasons. First, it is not a book on trauma confined to one of the surgical specialties such as orthopaedics—though much of the content is applicable to orthopaedics—but transcends the specialties. Second, it is not concerned merely with the treatment of the results of trauma but deals with the mechanisms of trauma, the recognition of the effects of trauma and a comprehensive approach to the handling of the problems created by trauma as distinguished from the mere treatment of the traumatic lesion.

This is not a book for any special segment of the profession but rather one for anyone and everyone who, whether general practitioner or specialist, is obliged in the course of his work to handle lesions caused by trauma. It could well be the professional text for indoctrination for mass casualty handling.

It is not a textbook, nor is it only a reference book. Rather, it should be the working tool of any physician who handles traumatic cases. One of the most valuable features of the book is the brief treatment of the surgical anatomy at the beginning of the chapter of the part of the body under consideration.

The illustrations, especially the outline drawings, are excellent and very helpful. The style is clear, easily understood and the recommended procedures represent the distillation of the author's experience rather than the compromise of various authorities.

The young man starting practice could save himself much anxiety if this book was on his desk and even the experienced traumatic surgeon would find it helpful in his decisions on complicated traumatic cases.

TEXTBOOK OF PEDIATRICS. Waldo E. Nelson, Editor, W. B. Saunders Company, 1959, 7th edition, 1413 pp. \$16.50.

Reviewed by WILLIAM E. LATTANZI

This well known textbook continues to be one of the most readable of all the major compilations of knowledge. It is somewhat shorter than the previous edition but paradoxically contains more contributors than its predecessor. This was apparently made possible by painstakingly eliminating excessive verbiage. The editors have done a remarkable job in having the text flow smoothly under this self imposed condition.

A new chapter on Diseases of Mesenchymal Tissues with a resume chart of differential diagnosis has been included. Drug Therapy and Dosages has been extensively rewritten to contain the common and newer compounds being prescribed for children. There has been major revision of many chapters to include the knowledge accumulated in the past five years.

For the medical student trying to acquire fundamentals, the pediatrician trying to keep pace with the broad field of pediatrics, and those interested in the problems of children, this book will serve well.

THE SURGEON AND THE CHILD. By Willis J. Potts, M.D., W. B. Saunders Company, Philadelphia, Pa., 8/10/59, 225 pp. \$7.50.

Reviewed by MARK HAYES

In the opinion of this reviewer, this is undoubtedly the most refreshing contribution to surgical literature within his memory. Dr. Potts, writing from a vast experience, has attained a remarkably informal, readable style. The material is presented with enough admixture of information, humor and literary skill to have it rival in professional popularity the lay popularity now ascribed to "Lady Chatterley's Lover."

It was thrilling to read the author's expressed concern of the impact of congenital and acquired surgical problems on the "little patient." This attitude is repeatedly emphasized throughout the publication.

There is no curtailment of valuable clinical information in the book; the content is good; the pithy judgments could only have arisen from extensive experience, but are never pronounced as the "last word." Care must be taken in reading this valuable monograph not to lose its clinical value in the charming informal manner of presentation by the author.

I am heartened by the courage of an author who omits extensive bibliographic material which always seemed to me to be a waste of paper (in these days of rising publishing costs).

This book is a must on the reading list of *all* people who ever see the "little folks" as patients.

MATERNITY, A GUIDE TO PROSPECTIVE MOTHERHOOD. By Frederick W. Goodrich, Jr., M.D. Prentice-Hall Inc., Englewood Cliffs, New Jersey, 1959, 123 pp. \$1.75.

Reviewed by LUTHER K. MUSSELMAN

In general, the material contained in this book of 123 pages is an excellent summary of the various subjects which are usually discussed by the obstetrician in assuming the prenatal care of the average maternity patient, especially in her first pregnancy.

The subjects are presented in a clear, concise systematic and orderly manner which adds to the ease and enjoyment of the reader. The discussion is informative but not alarming and as such should be included in the list of books which are recommended for the pregnant patient.

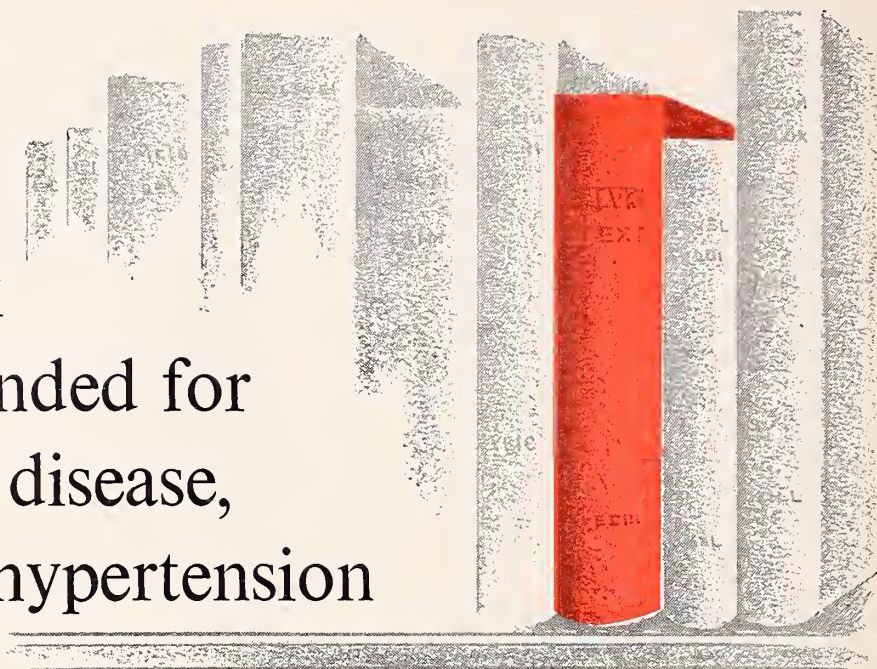
My main criticism of the treatise is the apparent attempt of the author to preserve the term "Natural Childbirth," though only two pages are devoted to it and its philosophical consideration.

Podiatry And Optometry

American Podiatry Association recommended that any legislation relating to health services for Federal workers and dependents make allowance for the choice of podiatry care by beneficiaries. A companion request was made by American Optometric Association.

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*Paul Dudley White, "Heart Disease" 1951
(Macmillan) page 480;

William D. Straud, "Current Therapy," 1955
(W. B. Saunders) page 102;

Cecil & Loeb's Textbook of Medicine, 1955
(W. B. Saunders) page 1,326;

Wilson & Gisvold, "Textbook of Organic Medicinal and Pharmaceutical Chemistry," 1956
(Lippincott) page 262;

Goodman & Gilman, "The Pharmacological Basis of Therapeutics," 1941 (The Macmillan Co.)
page 281;

Albrecht, "Modern Management in Clinical Medicine," 1946 (Williams & Wilkins) page 254;

Friedberg, "Diseases of the Heart," 1956 (Saunders)
page 285;

Walter Modell, "Drugs of Choice," 1958-1959
(C. V. Mosby) pages 100, 475, 615.

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Safety And Civil Defense

Directives received from the National Auxiliary on both Safety and Civil Defense have been sent to all county chairmen by the State chairman, Mrs. William Richards. The Safety suggestions to the counties are projects to be undertaken after approval by the county medical societies and the auxiliaries. These include: Safety in auto design, highway safety and greater home and farm safety for both oldsters and children.

Civil Defense suggestions include: preparing YOUR home for an emergency, KNOW—warning signals, first aid, protection from Fall-out and the use of Conelrad, and the continuation of an educational program on Civil Defense.

In September the state chairman attended a meeting of representatives from various towns and women's organizations of the state at the home of Mrs. Robert Vance, State Chairman of Civil Defense, Women's Division. The purpose of this meeting was to start a statewide program of Home Preparedness by giving Home Preparedness Awards to those homes in the state that are able to show they have prepared their homes by having all the items available which have been recommended by the Office of Civil and Defense Mobilization. This program will be supported by the auxiliary.

Community Service And Rural Health

During the summer arrangements were made by the chairman of the Auxiliary committee of community service and rural health, Mrs. John Gallivan, for this committee to man the health education exhibits of the State Medical Society at eleven fairs throughout the state. The main purpose of the project is the continuation of the medical so-

ciety's program to encourage residents of the state to seek the counsel of their physicians about immunization against polio, tetanus, and other preventable diseases. In addition, an exhibit on first aid procedures was co-sponsored with the Hartford County Medical Association at the Wethersfield Fair. The 1959-1960 community service program for county auxiliaries has been received from the National Auxiliary and sent to the county chairmen.

Semi-Annual Meeting Held October 20th

The semi-annual meeting of the Woman's Auxiliary to the Connecticut State Medical Society was held Oct. 20, 1959 at Gallo's Terrace in Berlin. During luncheon a Fashion Show by the Eleanor Rose Specialty shop of Farmington was modeled by the Litchfield County Auxiliary. Dr. Ellwood Weise, president of the Connecticut Medical Society gave a resume of the Forand bill. The guest speaker was Dr. A. Girija from India. She is the recipient of the Rotary International Fellowship to the Yale School of Medicine and is currently attending the department of Pediatrics at the hospital of the University of Pennsylvania.

In addition to the usual business meeting members were given a report of the recent Chicago Conference by president-elect, Mrs. Morton Arnold.

The Windham County Auxiliary was in charge of registration for the Conference on Rural Health held by the Connecticut Health League at the University of Connecticut in Storrs on September 30. Mrs. Morton Arnold, president-elect of the state auxiliary and Mrs. John N. Gallivan, state chairman of Community Service and Rural Health were the Auxiliary delegates to this conference.

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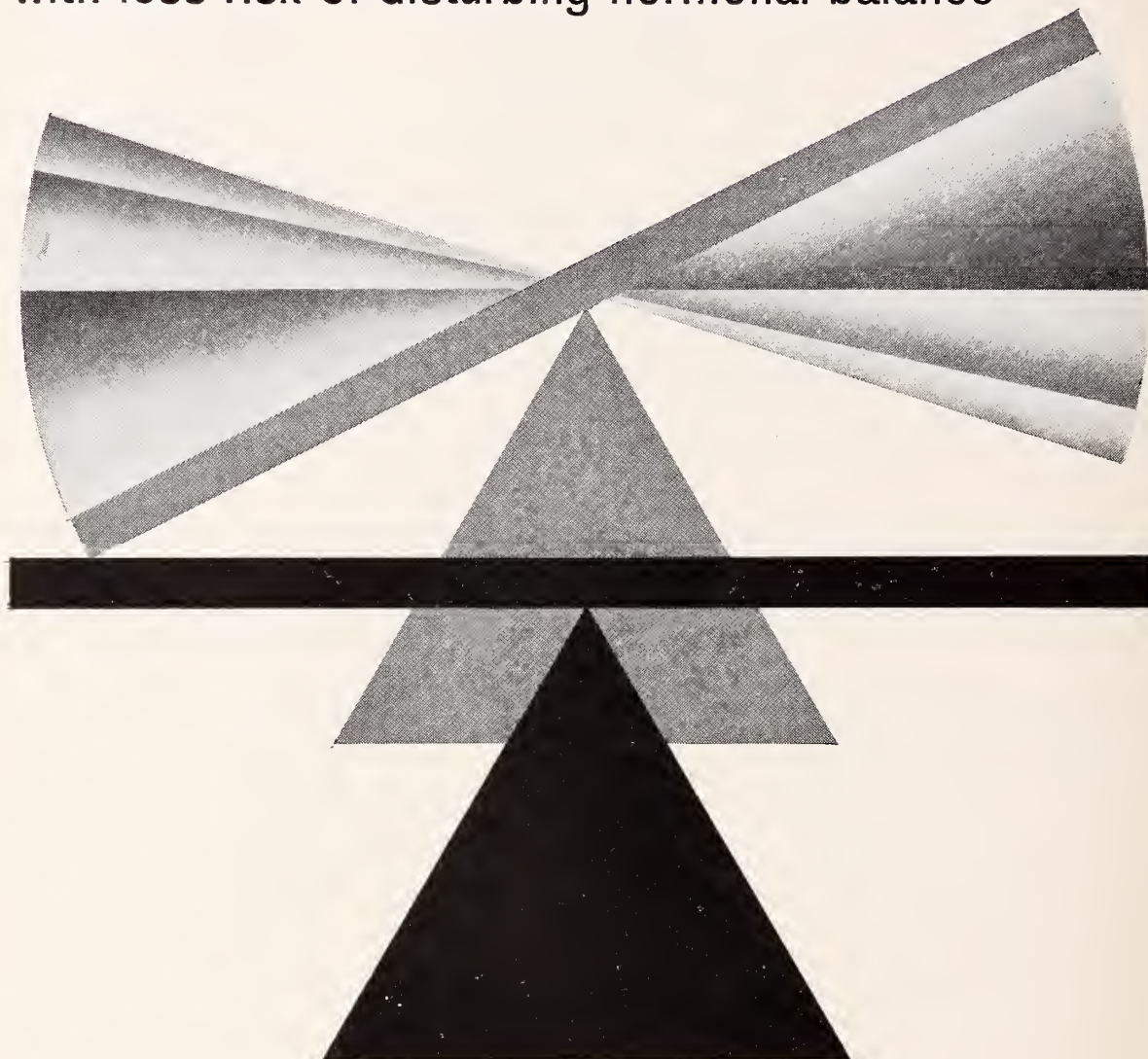
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1. Kuzell, W. C., and others.: Arch. Int. Med. 92:646, 1953. 2. Wolfson, W. Q.: J. Michigan M. Soc. 54:323, 1955. 3. Strandberg, B.: Brit. J. Phys. Med. 19:9, 1956. 4. Platt, W. D., Jr., and Steinberg, I. H.: New England J. Med. 256:823 (May 2) 1957.

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In Memoriam

Breck, Charles A.—Wallingford; Yale University School of Medicine, 1930; started medical practice in New Haven in 1930 and prior to that time served in the U. S. Army; a retired lieutenant colonel, he served in New Zealand with the 39th General Hospital Corps, Yale Medical Unit, during World War II; he was chairman of the Yale Medical School Alumni Fund, which he started, and founder and president of the Community Concert Association; died at Grace-New Haven Community Hospital following a brief illness, October 2, aged 54.

Madden, Leon I. — Avon; Harvard Medical School, 1910; practiced medicine in Greater Hartford for 40 years; he was active in church and community affairs and maintained these interests following retirement from medical practice in 1952; died at the home of his daughter in Haverhill, New Hampshire, September 19, at the age of 76 years.

McQueeney, Andrew M.—Bridgeport; Yale University School of Medicine, 1905; served as chief of the surgical staff at St. Vincent's Hospital, Bridgeport, from 1925 to 1951; active in civic affairs, he served as a member of the Bridgeport Board of Education for four years, being elected president in the fourth year; he also was a member of the Board of Directors of the Department of Welfare and the Board of Governors of the City Dispensary; he was the author of numerous surgical papers published in leading medical journals; died suddenly of a heart ailment September 20 at his summer residence in the Lordship section of Bridgeport, aged 78.

Geib, Henry M.—Milford; New York University Medical School, 1914; practiced with New York Board of Health and later as a physician with the DuPont Company, Delaware; he was resident physician at Rivercrest Hospital, Long Island, for several years; moved to Milford in 1927, where he established a convalescent home; died following a long illness September 9, aged 75.

Winternitz, Milton C.—Washington, D. C.; Johns Hopkins University College of Medicine, 1907; dean of the Yale University School of Medicine from 1920 to 1935; son of an immigrant Czechoslovakian physician; he received his college degree in 1903, at the age of 18 years, from Johns Hopkins University; from 1907 to 1917 he served as a Fellow, assistant instructor, and associate professor of pathology at Johns Hopkins Medical School and as pathologist at Baltimore's City Hospital; in 1917 he was appointed chief of the medical division, Bureau of Mines, to study the physi-

ological affects of war gases and to institute therapeutic measures; that same year he was awarded an honorary MA degree by Yale University and there he became professor of pathology and bacteriology; served as a captain in the Medical Reserve Corps in 1918 and was in charge of pathology and bacteriology research at the Chemical Warfare Service Laboratory at Yale University, advancing to the rank of major; throughout his career, Dr. Winternitz stressed the importance of integrating medical science with sociology and the other fields of study contributing to a better study of man and his environment; following retirement, he resided in Washington, D. C., with a summer home in New Hampshire, where he was stricken with illness this year; he died at the Hitchcock Clinic, Hanover, New Hampshire, October 3, aged 74.

Eye Examination May Prevent Stroke

By checking the blood pressure of the eyes, one cause of stroke can be diagnosed even before the stroke occurs, according to a group of Boston physicians.

A common cause of paralytic stroke is the clogging of the internal carotid artery, which leads through the neck to the brain.

If an obstruction, such as a blood clot, is found in the artery early enough, it can be removed by surgery or the use of clot-dissolving drugs, thus preventing a stroke.

Internal carotid artery insufficiency can be diagnosed by checking the blood pressure of the eyes. It is measured by a technique, called ophthalmodynamometry, which is described in the current Journal of the American Medical Association.

The authors are Drs. J. Lawton Smith and David G. Cogan, Harvard University Medical School and Massachusetts Eye and Ear Infirmary, and Dr. Irving H. Zieper, Massachusetts General Hospital.

In the procedure, the eyes are first dilated and anesthetized. Pressure is applied to the eyeballs and the blood pulsations are observed through the ophthalmoscope, the instrument commonly used in eye examinations.

The technique is rapid and safe, and is becoming increasingly important with the recent advent of more effective treatment of carotid artery insufficiency, the doctors noted.

In addition to its use as a diagnostic procedure, the technique can be used to check the effectiveness of treatment for carotid artery obstructions.

It should be used as a diagnostic procedure whenever patients exhibit such early signs of carotid artery obstruction as transient partial blindness; dizziness or nausea on changing posture, or weakness of the limbs on one side of the body.

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Realism Urged On Health Care

A united stand against the "thrusts of big government into the medical care field" and "realistic, positive approaches to all phases of health care" were urged by Dr. Louis M. Orr at the annual Blue Shield National Professional Conference held recently in Chicago.

Referring to the needs of the old-age population, the president-elect of the AMA said he was "gratified that Blue Shield has been one of the first to pledge its all-out cooperation in working with the medical profession to do an effective job in providing medical care for the aged, especially the lower income group."

FUTURE AT STAKE

He called for an even greater effort in this area, saying:

"The future of medicine and voluntary enterprise may well be determined largely by the extent to which Blue Shield and other voluntary financing mechanisms expand their coverage of the older citizens."

In a panel discussion, Dr. Ernest B. Howard, assistant executive vice-president of AMA, warned that the Forand Bill of the last Congress was just a "feint" in a broad strategy by advocates of government-financed health insurance for the aged.

He said the medical profession and voluntary health financing organizations must not be taken in by compromise proposals by backers of Forand-type bills which would include the principle of government-financed health care.

GOVERNMENT PURCHASE

An example of this, he said, was a plan whereby hospitalization coverage would be purchased by the government for the aged through an intermediary such as Blue Cross.

Dr. Donald Stubbs, Washington, D. C., chairman of the Board of Directors of Blue Shield, emphasized the urgent need of better understanding by all physicians of the job Blue Shield was created to do.

First Aid For Spinal Cord Injuries Explained

All injured persons who are unconscious or who complain of back or neck pain should be treated as though there were an injury to the spinal cord, according to an Indiana physician.

With careful treatment, more severe damage to the spinal cord may be avoided, Dr. Leslie W. Freeman, Indianapolis, wrote in a guest editorial in the current *Journal of the American Medical Association*.

A surprising degree of function can be attained after severe spinal cord injury, he said, but it is frequently the early handling of the patient that determines the ultimate outcome.

When a person is injured, he is usually first handled by a person untrained in medicine, and "it is amazing" how frequently they respond "instinctively toward proper handling," Dr. Freeman said.

However, he offered some suggestions for proper handling of the patient with a back or neck injury. The patient should be left unmoved until a physician arrives.

Then when he is moved, he should be moved "in one piece" without change in the vertebral alignment and never in a sitting or semireclining position.

If the patient can move his hands but not his legs, the spinal cord injury is below the neck. If he cannot move his hands, the injury is in the neck region, and the neck and head must be kept in perfect alignment with the body.

If the injury is below the neck enough persons must be present to lift the patient in such a way that the spinal alignment is not changed, and he should be placed on a stretcher (which might have to be improvised of boards) fully extended with the face down, Dr. Freeman said.

When the injury is in the neck area, the most convenient method for immobilizing the head is to wrap a tapered roll of heavy cloth around the neck until the bundle comes to the jutting end of the chin.

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**Mushroom Workers Develop
"Farmer's Lung"**

Commercial mushroom growing carries a peculiar hazard—at least for some of the workers, who develop a lung condition similar to "farmer's lung" and "silo-filler's disease."

Writing in the current *Pennsylvania Journal of the American Medical Association*, three West Chester, Pa., physicians reported 16 cases of the disease among migrant Puerto Rican mushroom workers.

The Puerto Ricans seem to be susceptible to some substance in the compost beds used in growing mushrooms which does not affect the workers of local origins, the doctors said.

Symptoms include cough; pain in the chest, stomach or muscles; difficulty in breathing; nausea and vomiting; headache; chill, rapid weight loss; loss of appetite, and tiredness. An attack lasts from four to 46 days, subsiding within one to six weeks after the patient is removed from exposure. No immunity appears to develop, since acute symptoms reappear with each exposure. The symptoms sometimes resemble those of tuberculosis.

The physicians are unsure of the cause of the condition, but it could be the inhalation of molds or organic dusts during the laying or cleaning of damp

compost beds which contain moldy hay and silage. Such dusts are believed to cause farmer's lung.

However, the symptoms also resemble those of silo-filler's disease, which is believed to be caused by the inhalation of certain gases, especially nitrogen dioxide, liberated in recently filled silos. It is possible that some of the gases which collect above the mushroom beds in poorly ventilated buildings contain nitrogen dioxide, the doctors said.

The symptoms of their patients could fit either farmer's lung or silo-filler's disease, the doctors said, adding that after reviewing the medical literature, they cannot make any sharp differentiation between the two diseases.

The authors are Doctors Louis S. Bringham, Robert N. Byrne, and Jacob Gershon-Cohen of the Chester County Hospital, West Chester, Pa.

Fluoridation Campaign Launched

The federal government has embarked on an all-out campaign to sell local communities on the value of fluoridation of water supplies to reduce dental caries.

Secretary Arthur S. Flemming of the Department of Health, Education, and Welfare, launching the effort at a news conference, said enough money is available to HEW to tell the story "that needs telling" without asking Congress for an additional appropriation.



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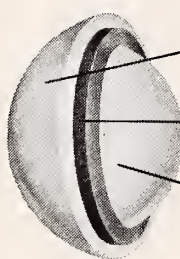
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Newest Oral Diabetic Drug Is "Clearly" Useful

DBI, the newest oral diabetic drug, is clearly of value in the treatment of all types of diabetes, Dr. Julius Pomeranze, New York, said recently.

Dr. Pomeranze, who conducted the first clinical tests of the drug, made this comment in the current Journal of the American Medical Association. He reported the results obtained in 206 diabetics given the drug for periods up to two years.

DBI, or phenethylbiguanide, is one of a group of drugs known as biguanides. It differs in action from other anti-diabetic drugs taken by mouth, which are sulfonylureas.

Dr. Pomeranze said, "The ultimate place of DBI in the management of diabetes will be determined after much more prolonged and widespread observation."

However, when it is used carefully, adjusting the drug to the patient's needs rather than attempting to fit patients into a rigid dosage pattern, it permits the cessation of insulin therapy in a significant percentage of diabetic patients and is useful, together with insulin, for better control of many of the patients with more severe cases.

The study showed that DBI could be used alone or with a reduced amount of insulin in 62 percent of the patients regardless of the type of diabetes. The use of other oral drugs is limited to mild or stable cases of diabetes, since they are ineffective against juvenile or "brittle" diabetes.

DBI allowed some patients with mild diabetes to stop using insulin altogether and some with more severe cases to cut the amount of insulin used.

Diabetes occurs when the pancreas fails to secrete enough naturally-occurring insulin to burn up all the sugar taken in by the body. Then artificial insulin is necessary. The oral drugs do not replace insulin, but apparently help the body to better use what insulin it has.

Dr. Pomeranze said the sole limitation to the broader use of DBI appears to be its gastrointestinal side-effects. Twenty-six percent of the patients treated had to stop the drug because of gastrointestinal side-effects. It seems that these are "inherent in the drug when proper individual dose is exceeded," Dr. Pomeranze said, but they may serve as a useful dose regulator and perhaps as a safety device.

Cooperating with Dr. Pomeranze in the study were Drs. George T. Mouratoff, Raymond J. Gadek, and Edward J. King. They are all associated with the New York Medical College-Metropolitan Medical Center Bird S. Coler Memorial Home and Hospital.



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Early Use Of Hypotensives Urged

Use of antihypertensive drugs as early as possible in labile cases and even prophylactically in patients with family history of hypertension was advocated by Dr. Robert W. Wilkins, Professor of Medicine at Boston University School of Medicine, at a symposium.

He was one of six physicians who participated in a "Report to the Nation" program reviewing advances in the last decade against cardiovascular disease, sponsored by the American Heart Association and the National Heart Institute.

The others were Drs. Howard B. Sprague, Lecturer on Medicine at Harvard Medical School; Paul Dudley White, Boston; Irvine H. Page, Director of Research, Cleveland Clinic; Michael E. DeBakey, Professor of Surgery, Baylor University College of Medicine; Robert W. Berliner, associate director in charge of research, National Heart Institute.

Dr. Wilkins said that the major area of disagreement among cardiologists is whether the very mildest or earliest cases of hypertension should be treated prophylactically with drugs. He said he sided with those who favor such use.

"It would appear that in patients with a strong family history of serious high blood pressure this may also be worth while, since it is now clear that high blood pressure is definitely a familial disease that tends to progress with age," he said.

In a subsequent discussion, he said, "We are getting close to discovering the causes of essential hypertension, but as we learn more about cardiovascular conditions we also learn that we are naïve to expect to find many diseases with a single cause."

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Cholesterol Role In Heart Disease Still Unknown

The significance of lowered blood cholesterol levels in the prevention and treatment of heart disease is not definitely known, according to the American Medical Association's Council on Foods and Nutrition.

Methods of manipulating the blood levels of cholesterol have become of utmost interest, and because their importance is unknown confusion has resulted, the council said in a report in the current A.M.A. Journal.

In an attempt to keep physicians informed of current knowledge about cholesterol, the council presented the views of five foremost researchers in the field.

"Of all the chemical compounds that are measured in clinical laboratories, there is none about which more has been written and about which less is understood than cholesterol," according to Dr. Lawrence W. Kinsell, Institute for Metabolic Research, Highland-Alameda County Hospital, Oakland, California.

It is well established, he said, that, statistically, elevated levels of cholesterol are found in association with atherosclerosis (one form of hardening of the arteries). It seems reasonable, therefore, to believe that measures directed toward lowering the levels may work in a desirable way.

However, since cholesterol is a normal essential part of the human body, "it is obvious that attempts to 'get rid of' this compound would be both unphysiological and impossible," Dr. Kinsell said.

The objective, then, must be to achieve normal cholesterol metabolism with consequently normal blood levels in the hope that such a program will prevent abnormal deposits of cholesterol in the blood vessels, he said.

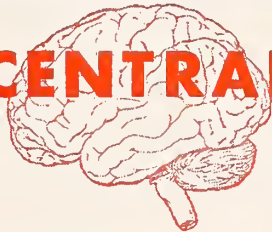
Among the methods mentioned by the physicians are the use of diet, such drugs as nicotinic acid, estrogens, and increased exercise.

The significance of lowered levels hinges on the question: How fundamental is the role of this substance in the development of atherosclerosis?

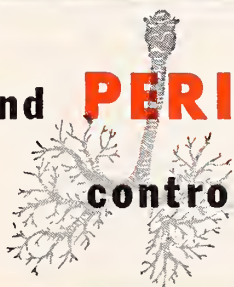
According to Dr. W. Stanley Hartroft, of the department of pathology, Washington University Medical School, St. Louis, rat studies at his school have shown that the development of heart disease in an individual rat could not be predicted on the basis of its level of cholesterol.

This and other studies have suggested that when all the facts are uncovered, it "is not unlikely" that some other substance or substances in the blood may have a more direct bearing on the problem of atherosclerosis than does cholesterol, Dr. Hartroft said.

Research into the role of cholesterol and other



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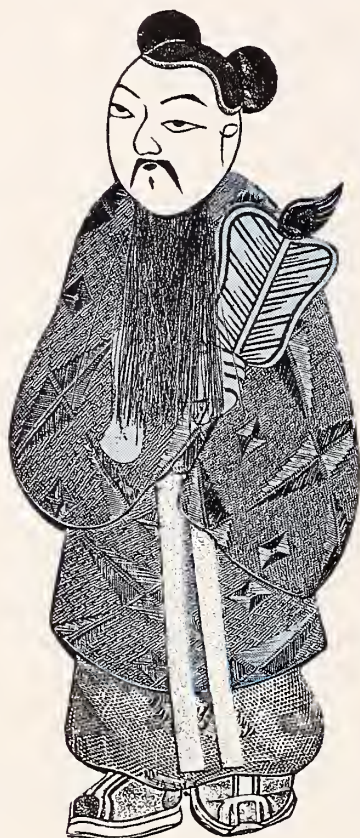
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factors must, of course, continue, he said. But in the meantime, there is probably little reason to recommend attempts to lower cholesterol levels in the blood of healthy men and women as long as those values fall within the usual ranges for people in the United States.

Dr. Edward H. Ahrens, Jr., and his co-workers at the Rockefeller Institute, New York, agree with Dr. Hartroft. They said, "Widespread, drastic revision of dietary practice seems unwarranted at this time." They hope that a more certain and direct approach to the prevention of atherosclerosis will be forthcoming as knowledge increases.

Dr. Ahrens listed several points of agreement concerning cholesterol. They are:

—Substitution of dietary fats rich in polyunsaturated fatty acids (such as those found in vegetable oils) for those rich in saturated fats (found in hard fats such as butter) will lower cholesterol levels in almost every person, whether he has normal or above-normal cholesterol levels.

—The greater the substitution, the greater the effect; thus little benefit is obtained by merely adding a supplement of polyunsaturated fat to an otherwise unchanged diet.

—The effects of substitution are due to differences in fatty acid structure and not to trace factors such as vitamins, minerals, sterols, or other undefined nonfatty acid substances.

—The oral administration of other agents, such as nicotinic acid, also decreases serum cholesterol levels, but presumably by other mechanisms.

Dr. Joseph M. Merrill, Veterans Administration Hospital, Nashville, Tenn., warned that drugs and diets are still in their experimental stage and probably should be left to the investigator.

Campaign Urged Against Cancer's Four Horsemen

A slap in the face may be needed to arouse "cancer consciousness" in the public and in the medical profession.

Dr. Louis M. Orr, president-elect of the AMA, suggested such a slap in the form of a vigorous program of education designed to slay what he calls the Four Horsemen of Cancer.

Speaking before an area medical meeting of the American Cancer Society at Atlanta, Ga., Dr. Orr defined the Four Horsemen as:

Ignorance—No longer signifying a total lack of knowledge about cancer. Ignorance now befuddles people and gives rise to two of the other horsemen, Fear and Quackery.

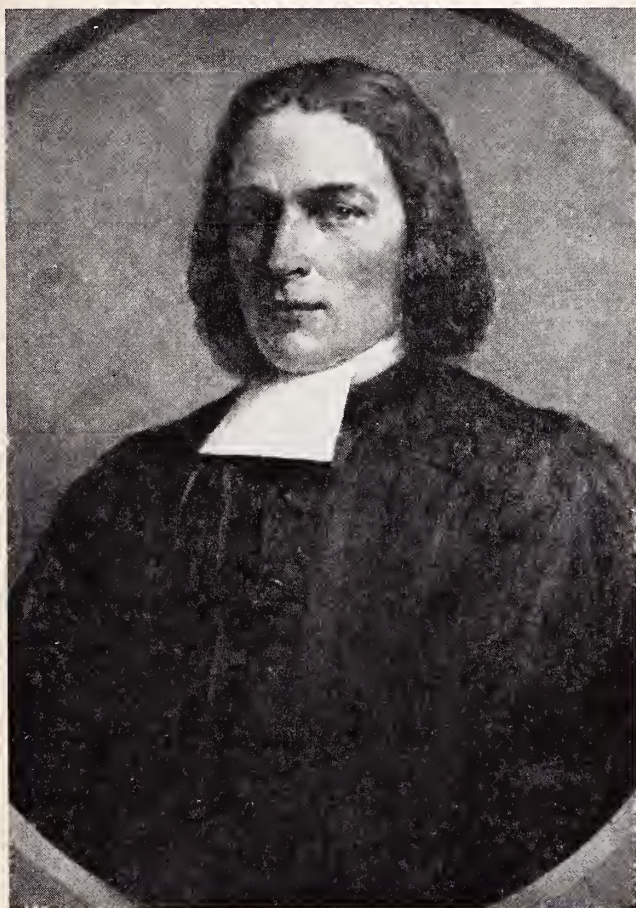
Fear—It leads to half-truths and secrecy, keeps many people from consulting a doctor about symptoms.

Quackery—This villain leads his ignorant and frightened victims to waste precious time, promising anything in return for money.

Apathy—Allied with indifference and unconcern, Apathy assists a disease such as cancer because medicine can do little for the uninterested patient.

THE PORTRAITS OF TWO CONNECTICUT DOCTORS

Pioneers in American medicine . . .



JARED ELIOT, 1685-1763



ELI TODD, 1769-1833

HERBERT THOMS, M.D.
New Haven

Dr. Thoms is Curator of Yale Medical Memorabilia, Yale Medical Library.

CONTEMPORARY portraits of two Connecticut doctors both famous as pioneers in American medicine have recently come to light and now in replica adorn the walls of the Yale School of Medicine. They represent Jared Eliot of Killingworth (Clinton) and Eli Todd of Hartford. Eliot the greatest cleric-physician of his time has been called the father of regular medical practice in Connecticut, and Todd is recognized as the great pioneer in American psychiatry. It is appropriate that these portraits find a place in the halls of Yale University

for Jared Eliot as senior trustee of the Yale Corporation in the critical years prior to the American Revolution performed great service to the College, and Eli Todd as a leading practitioner in Hartford and as an officer of the Connecticut State Medical Society was greatly influential in the early years of the Medical Institution of Yale College, now getting ready to celebrate its sesquicentennial in 1960. The copies of these two paintings were executed by Professor Deane Keller of the Yale School of Fine Arts. The Eliot painting has been given a somewhat free treat-

ment in rendering because of the unkind ravages of time against the original painting. The Todd replica is a facsimile.

The Rev. Jared Eliot recently has been the subject of a short biography by this writer¹ and of further present interest is the restoration of his tombstone in Clinton Cemetery by the Yale University Library. Jared Eliot was the first donor to the endowed funds of the Library. Another memorial at Yale is seen in the Jared Eliot Gateway in the Harkness Memorial Quadrangle.

Jared Eliot's greatness extended to a number of fields of interest which besides theology and medicine included agriculture, horticulture, mineralogy and conservation. He wrote the first agricultural treatise published in the American Colonies and was the first to introduce silkworm culture. With all this he was a faithful pastor to his congregation and carried on a medical practice which included consultations as far away as Newport and Boston. Benjamin Franklin who was a lifetime friend and correspondent no doubt gave him advice and encouragement on many occasions. Eliot's father, Rev. Joseph Eliot of Guilford, was also a cleric-physician as was his grandfather Rev. John Eliot, the celebrated Apostle to the Indians.

When Abraham Pierson, Yale's first president passed from the scene as pastor of Killingworth Church he was succeeded by Jared Eliot then teaching school in Guilford. It is significant that the earliest medical society idea in the Connecticut Colony owes much of its origin to Jared Eliot. According to Henry Bronson, (quoted by Creighton Barker),² "A medical society in the State was long in contemplation by the faculty, and in 1739 some of the most eminent met at New Haven for consultation. They recommended the faculty in general to meet the next year. They met at New Haven . . . Doctor Jared Eliot was chosen chairman. They remained in session two days and deliberated on a plan but did not agree and adjourned without day."

At the bicentennial celebration of Yale in 1902 Dr. William H. Welch paid this tribute to Jared Eliot,³ "But of all those who combined the offices of clergyman and physician, not one from the foundation of the American Colonies attained so high a distinction as Jared Eliot of the Class of 1706."

Eli Todd of Hartford is recognized today as a true pioneer in American psychiatry. He not only played a leading role in establishing the Connecticut Retreat for the Insane but as its first superintendent introduced modern medical treatment there and trained men who carried on his work and became leaders in the field. His story as a wealthy New Haven boy, a graduate of Yale in 1787, and as a successful medical practitioner of Farmington, Connecticut, is outlined for us in C. C. Burlingame's

chapter in the *Heritage of Connecticut Medicine*. His formation of a society of medical friends during his first year at Farmington was a forerunner of the Connecticut Medical Society.

Todd's greatest triumph and indeed a signal event in the history of American psychiatry came in December 1820 in his celebrated address before the Connecticut Medical Society in which he declared,⁴ "I am convinced that mental disorder is as definitely a manifestation of disease as a fever or a fracture. It is our duty as civilized men to attack this disease. Let us make diligent inquiry, find out how prevalent this disease is, and then establish an institution for its treatment and cure."

Eli Todd was elected twice as President of the Connecticut Medical Society declining to be nominated again. This recalls a practice common in the early years of our Society commented upon by Dr. Francis Bacon of New Haven who wrote with characteristic vigor,⁵ "It is a noticeable and, I think, a significant fact that for many years after the foundation of this Society the tenure of office of its annually elected presidents was often prolonged through successive years. Not for many decades did we think of borrowing from mousing politicians the paltry and pernicious notions of annual rotation in office and geographical claims for official position. The aim of the Society seemed to honor itself in its officers and so when some such fitly chosen name as Eneas Monson or Mason Cogswell was placed at the head it was likely to stay there year after year until death or declination of re-election changed it."

The portrait of Jared Eliot now may be viewed in the Memorabilia Room of the Yale Medical Library. Its painting was made possible through the generosity of members of the Beaumont Medical Club and the Medical Library Associates. The Eli Todd portrait is to be seen in the Department of Psychiatry and is the gift of friends of that department.

From the Department of the History of Medicine, Yale University.

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2. Barker, C. The Origin of the Connecticut State Medical Society, Chapter 1, p. 2, *The Heritage of Connecticut Medicine*, New Haven 1942.
3. Welch, W. H. *Yale in its Relation to Medicine*, privately printed, 1902, p. 7.
4. Burlingame, C. C. In *The Heritage of Connecticut Medicine*, New Haven, 1942, p. 155.
5. Bacon, Francis, *Proceedings of the Connecticut Medical Society*, 1892, Bridgeport, 1892, p. 193.

NOTE: The original painting of Jared Eliot is in the possession of Mr. John Eliot of Wilbraham, Massachusetts. The artist is unknown. The original painting of Eli Todd is in the possession of the Connecticut Historical Society. The artist is unknown.

FEAR	AND	PHOBIAS
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The patient can be cured. Requires hard work on part of the doctor . . . and a fundamental desire on the part of the patient for recovery.

WILLIAM B. TERHUNE, M.D.
New Canaan

Dr. Terhune is Medical Director of the Silver Hill Foundation; Associate Clinical Professor of Psychiatry, Yale University.
Delivered March 27, 1959, Ohio State University Medical School.

I. Definition

A PHOBIA is a strong, unreasonable fear of specific places or situations, inhibiting the individual from advancing into or remaining within certain areas. The phobist circumscribes his life to avoid the possibility of finding himself in the dreaded place or situation. A phobia is the purest form of psychoneurosis. This fear is consciously ascribed to certain situations, places, or activities, but is unconsciously related to earlier life experiences and fundamental psychological mechanisms. It has become a conditioned reaction. The phobic reactions are definite, specific symptoms. Once they occur they are likely to become progressively worse.

The phobic reaction is an unwillingness to be in certain familiar places in which the phobist feels cooped up, cannot escape, and where in the presence of others he might act in a panicky and uncontrolled fashion. The usual phobias are fear of barber shops, beauty parlors, stores, dentists, offices, restaurants, theaters, movies, trains, planes, ships, elevators, islands, dinner parties, and business conferences. If he does go to a moving picture, church, or theater, the phobist sits in the last row, on the aisle. Their life history shows that they have been nervous much of their lives, always dreading responsibilities. Since adolescence they have had more than the usual number of superstitions. They were very imaginative but never used their imagination constructively—instead they were likely to conjure up morbid situations in which dire things might happen to them.

In adulthood the acute onset is preceded by fatiguing and precipitating emotional strain. These

symptoms are startling, overpowering, and confusing to the conscientious individual who has high standards of personal performance.

II. Types of Phobic Reaction

Over one hundred specific phobias are described in the literature. A multiplicity of terms has concealed a scarcity of knowledge. Those currently encountered follow a definite pattern, a characteristic clinical picture, and are easily described, diagnosed, and treated. The outstanding symptom is exaggerated fear and dread of fear. They occur as *incipient*, *acute*, or *chronic*.

Incipient—Certain traits in childhood personalities are fertile soil for this neurosis. The extremely apprehensive, dynamic, introverted, imaginative, dependent, sweet child who lives and plays alone; the “good,” “scared,” “babyish” child who shows early strong avoidance reactions, particularly if given to mood swings—these are the incipient phobists.

Acute—The acute phobia usually occurs in the twenties or early thirties, depending on when unexpected responsibility and frustrations accumulate in a vulnerable personality. An acute phobic reaction bursts into blossom when the vulnerable person is forced to move into the front-line trenches of life.

Chronic—The chronic reaction is most frequently seen in psychiatric practice. Starting with one phobic panic, the patient quickly acquires the standard pattern. The chronic phobists are compliant, selfish, and self-effacing. They are easy to be with and cause little trouble. When increasing phobic reactions block the usefulness of the person, it is

the relative who insists on treatment. By this time, the phobic reaction is a complex, deep-seated, neurotic mechanism.

Phobists say they are afraid of fainting, "going crazy," dying, creating a scene, not being able to "get out." Dreading that one or all of these may occur in a certain situation and feeling that while in such situations in the past they have barely escaped personal catastrophe, they avoid them, are ashamed of their reactions and ingeniously conceal them, even from the physician.

III. History

The medical discussion of phobias continues scant. Modern medical literature referring to anxiety hysteria and phobias reveals little understanding.

IV. Incidence of Occurrence

It is difficult to obtain accurate figures as to incidence. It is more prevalent than ordinarily assumed and more cases are coming to light now than previously. Among sixty-five hundred psychoneurotic patients, there have been three hundred and fifty phobists, thus the phobic incidence was three per cent. Other physicians have quoted as high as eight per cent. Many more phobias are being seen by the psychiatrist than formerly.

V. Onset

The initial phobic reaction is a devastating experience. Wholly unexpected, it follows a period of unrecognized emotional strain. Often the patient has not previously recognized his neuroticisms. To such a weakly integrated personality, an acute phobic reaction is an atomic bomb. Confusion, inability to think, indecision, weakness, a sense of unreality and strangeness suddenly attack such a personality and he seeks a permanent bomb shelter—a chronic neurosis. After several such experiences the individual develops other neurotic reactions and is surrounded by neuro-active "fallouts" as far as he is concerned.

VI. Etiology

The psychodynamics of phobias as described in the literature are not convincing.

The Freudian literature indicates that phobias are the result of sexual frustration, unconsciously feared or desired punishment, traumatic experiences, conditioned reactions or unfavorable emotional conflicts with near relatives. These fears are considered a substitute for repressed complexes.

Janet classified the phobias under psychasthenia. He stated that greater sexual activity, more social life, opportunity for fuller self-expression, and learning to give and take are an important part of treatment. He believed that these patients live in an

unfavorable environment and that in order to get them permanently well the environment must be modified. The importance of favorable modification of environment we have found to be true in a significant number of cases.

VII. Dynamics

Phobic reactions occur twice as often in women as in men. The majority of patients seen are between twenty and forty years of age. Either one or both parents of 75 per cent of these patients have been markedly neurotic—in some instances phobics. Eighty-five per cent of the patients were married (only four more than once) and only three had been divorced. They had less than the average number of children, frequently only one child.

The men were executives or professionals; the women homemakers. Handicapped by fear, most of the men and women had not been outstandingly successful in life, but had conscientiously done enough of their job to get by until the phobic reaction became so severe as to become a roadblock in life.

Most of the men had gone to college and most of the women to boarding school, but one half of these privileged people had failed to take advantage of their exceptional opportunities for education, travel, and cultural development. Few had varied interests or hobbies. They were not athletically inclined and seldom participated in sports or competitive games. The majority were reared in an over-privileged environment, lived poorly balanced lives, were remarkably free from bad habits but lacked the self-discipline of moderate regimentation. They were not particularly satisfactory marital partners nor very good parents. In spite of this, they were loved by their spouses and children, probably because of their easy-going temperaments.

Sex did not seem to play an important part in the phobic reactions. Phobists showed mild but apparently sufficient interest in sex, and no unusual sexual frustrations, guilt, or sex inhibitions occurred in childhood or later. There is no demonstrable connection between sexual maladjustment and phobias.

Ninety per cent of these patients never had a serious illness and this absence of somatic illness is worth noting. The phobist had been over-protected, brought up "soft," and perhaps if he had had a severe illness he might have been toughened by that experience. Not one of these patients ever acquired a psychosis, but quite a number turned to alcohol and barbiturates to relieve their discomfort.

Constitutionally, phobists are suggestible, imaginative, and sensitive. They have high standards of conduct, exceedingly good intelligence, and ambition. They do not have strong drives of any kind,

including sex, and they are immature and dependent. Over protected from childhood, they were homesick at camp and boarding school and were allowed to come home to parents who were themselves fearful and nervous. Apprehension, suggestibility, and sometimes phobic reactions run through families for generations. Such an environment tends to foster the development of escape mechanisms which later in life under tension and unfavorable circumstances become phobias.

These fundamentally apprehensive people, having been fearful all their lives, react to any threat or frustration with exaggerated fear, and are unable to stand the discomfort that results. Their tendency is to escape, to run away from unpleasant situations and, ashamed of their fears, they have built elaborate systems of deception. They want things to be pleasant so they avoid disagreements, competition and do not "fight." They are for peace regardless of price. They are overly aware of what other people think about them and do all kinds of little things to gain favor; but when it comes to the big things of life, they are selfish. They are superficially affectionate but they have not learned to love deeply; their affection is childish, a demonstrativeness for which they hope to receive in return attention, affection, and protection.

VIII. Psychodynamics (Physiological and Psychological)

It is necessary to consider the patient's physical condition, his constitutional makeup, and the environment under which his phobias developed. It is important to know his personality, daily surroundings, the tensions under which he lives and works, and particularly any unusual stress situations to which he may have been subjected, either in the past or recently, and how he has met these situations.

Having reached adulthood handicapped by personality trends of dependency and escape reactions, given to mood swings of mild elation and depression, phobists attempt to take part in a competitive world without adequate psychological preparation. As they come in contact with the dangerous realities of existence, phobists find life too difficult to cope with and, frustrated, they develop uncomfortable physical symptoms. Unfavorably conditioned to specific situations, they regress to a childish level of adjustment. Subconsciously they use specific fears as excuses for not attaining a greater measure of success. Situations which ordinarily occur in the life of every individual overwhelm them. Any change in their life situation is disastrous. For instance, if the husband's business demands increasing absence from home or if the patient must leave an accustomed environment and move to another part of the country or change their scale of living to a more complicated

pattern, they cannot meet the challenge. Under the strain there is a revolt of the sympathetic nervous system giving rise to physical symptoms which startle and frighten them. They become so patently ill that no one has the heart to try to make them do what others do as a matter of every-day life. If an attempt is made to force them to do that to which they feel unequal, phobists do not react with evident anger, but usually with intellectual and emotional paralysis resulting in acute panic.

The conditioned reflex mechanism plays a prominent part in subsequent phobic reactions. Once an acute phobia has occurred, say in a closed place, and the individual has decided that it is impossible to undergo a repetition of that situation, additional phobias of similar character accumulate. Once the individual has a phobic reaction and evades the issue, he has invited a host of phobias to control his life henceforth.

IX. Prognosis

If properly treated, the prognosis is good—particularly when treated in the early acute state. If left untreated, the patient will grow worse, become chronic, and retire from life. Most phobists can be cured provided they stay under treatment long enough. These patients usually get better to a degree and then declare that they are well and try to discontinue treatment before all their protective and defensive mechanisms have been taken away.

All phobias are neurotic attempts to compensate for unsuccessful adaptation on one or more of the four levels of adaptation: physical, emotional, intellectual, and spiritual. Therefore, the physician not only must deal with specific phobias, but must discover and treat the underlying conditions of which the phobias are symptoms. If the phobist is to be permanently cured, the conditions he is unconsciously attempting to cover up must be discovered and treated as the reality which is to be met adequately.

X. Prophylaxis

The best time to treat a phobia is when it is incipient. Parents, family physicians, pediatricians, teachers and recreation directors should recognize early evidences of the phobic reactions. Parents should see to it that children who are unduly fearful receive early and skilled psychiatric guidance.

The children must be taught courage, not by word of mouth but by kind, patient, and tolerant example. If a child is shy and fearful, the parents should not over-protect him, but instead teach him the attitudes and techniques of dealing with fear as an immunizing process. The basically apprehensive child must be taught to be adventurous, to accept the discomfort of fear and look forward to the pleasure of adventure and achievement. It is especially

important that these young people should participate in so-called dangerous sports—ice skating, skiing, swimming, sailing, and flying. They need to take part in competitive games and at an early age learn to work. They need to be successful in some area of interest and must learn to put forth the effort and endure the discomfort that accompanies worthwhile achievement.

The successful person is usually one who has been taught to endure more pain and discomfort than the one who stops short of success. Children and emotionally immature adults can be taught to avoid escape mechanisms and subterfuges to escape discomfort or unpleasant situations. They need a practical philosophy of life which enables them to reconcile ambitions and ideals with reality. Too often no intelligent appraisal is made of what they would like to accomplish in relation to actual potential. When they fall short of the impossible goals they have unrealistically set for themselves, they not only fail to gain the satisfaction of achievement, but also develop an unjustified sense of failure, inferiority, and guilt. Life is just too much for them and through phobias they attempt to escape situations to which they feel unequal.

XI. Treatment

Treatment of the phobic reaction is similar to that of other types of psychoneuroses with additional specific techniques as applicable. Phobias are symptomatic of an underlying psychoneurosis that must be discovered and treated, a habit response which must be reconditioned. An *acute* phobic reaction should be regarded as an emergency and taken care of promptly. There is no time for a delayed psychiatric appointment.

Psychoneurotic treatment begins with the therapeutic history, a comprehensive review of the patient's life, an account of previous and present illnesses and a description of his basic personality. In addition, the doctor must elicit an avowal and full details of *every specific phobic reaction*. Not only must he learn what the phobias are, he must also find out what they mean to the patient, how he interprets them, and exactly how he reacts to his phobic neurosis. This information can seldom be elicited in the first few interviews. The patient fears that the doctor is going to make him do the things of which he is afraid. Although he wishes to escape phobic discomfort and be free from fear, the secondary gain of his illness is such that he actually does not want to get completely well and have to recognize and deal with his fundamental difficulties. The entire life history must be reviewed to ascertain any failures, frustrations, strains, and patterns of reaction developed to meet failure. Submerged traumatic experiences must be uncovered.

Unconscious fears brought into the area of consciousness are not easily dissipated. After the patient is intellectually aware of the cause and nature of neurosis, he continues his attempt to escape discomfort through phobic reactions until the principles and techniques of psychiatric reeducation have been integrated into his personality structure and emotional maturation advanced. The background of the treatment of the phobic patient is strengthening of the basic personality. These patients need to be placed in a therapeutic environment where treatment is extensive and intensive. They must be socialized. This is best accomplished by exposing them to a small psychotherapeutic unit where they will associate with pleasant people. They must live on a balanced schedule of work, rest, exercise, and play. Didactic reeducation is essential.

The patient's schedule includes an hour of psychotherapeutic interview daily with the doctor, together with two hours of study of pamphlets dealing with reeducation. Reeducation must be taught by the doctor, each subject explained before the patient reads and studies it. During reeducation, symptoms are temporarily put aside; they are not discussed in the clinical interviews at first. Every effort is made to socialize the patient, get him to live a normal life and learn to disregard at least the minor discomforts.

Group seminars for discussing interpersonal relationships are held concurrently with didactic reeducation. The fact that these seminars are appropriate for the whole group makes the patient realize that he is not "alone" in his problems, not "different" from other people. He learns that about eighty per cent of the people in the world are at one time or another seriously handicapped by emotional disturbances or psychoneuroses. He comes to understand that neurosis is the income tax of civilization and that reeducation reduces that tax. Four weeks' concentration on this didactic material keeps the patient from dwelling on his symptoms and troubles, shows him solutions to many of his problems and breaks up his habit of thinking of himself as a sick person.

In the second phase of treatment, the patient and doctor discuss unsolved difficulties, specific phobias and practical techniques of dealing with them. He is now mixing socially with people, walking several miles daily alone and with people, and is unafraid of physical symptoms. He is comfortable physically and emotionally. These evident indications of improvement are stressed with the patient to increase self-confidence and trust in the physician. Trust and confidence in the physician is the bridge over which he crosses to find confidence in himself, other people, and the world he lives in.

The patient must learn the nature of fear, to in-

interpret it not as a threat, but an instinctive, automatic reaction, as nothing to be ashamed of and frequently of no indicative value. He should comprehend that fear is a natural, normal reaction and that although it seems to threaten him it has no weapons except those he gives it. In other words, the treatment of fear is a matter of re-interpreting its nature and reconditioning the reaction to it.

Fear is the normal stimulus to courage and must be used as such. Courage being one of the pleasant experiences of human life, these individuals must learn that it is through fear and courage that man acquires adventure which, next to his sense of humor, is one of his greatest joys and rewards. To put it simply, he must be taught how to find fear a pleasant experience, to welcome it, to learn to dare. If there is no fear in his life it means he is without courage to dare, or adventure, and usually without success. Therefore, if he is without fear he must look for new satisfying adventures in which fear will be a concomitant. He must take pride in his ability to withstand the discomfort of fear, use it as a stimulus to courage, and advance into adventurous satisfaction.

The principles of reconditioning specific fears are:

1. The patient learns to accept temporary discomfort.
2. He knows the nature of his illness and understands the techniques of dealing with it.
3. He is determined to recondition his unpleasant conditioned emotional reactions, i.e. phobias.
4. Because of his trust in the physician and his desire to be well, together with his wish to be a success in life, he cooperates in specific undertakings that involve placing himself in situations of which he is afraid.

Specific phobias are best reconditioned in this chronological order: walking alone, going to movies, restaurants, beauty parlors, and the theater, riding on the train, driving a car, going to a distant city, flying on a plane, and lastly learning to fly a plane. Even when this is accomplished, the physician may find that there are some residual fears about which a patient never told him. For example, fear of eating certain foods, sleeping alone, staying in a house alone, being in a hotel alone. The doctor then teaches him to cope with these residual fears.

When the patient has once accomplished the things of which he is afraid, he must be put through the reconditioning process repeatedly, and never again allowed to avoid those situations from which he has been escaping. When a specific task is set by the doctor to help the patient recondition a fear, the patient should undertake it at once and not be allowed time to think it over. On completing the prescribed task, the patient reports at once to the doctor in person. If the individual fails to carry out

the prescribed project the first time, little is made of his failure, but in the very near future a similar and more interesting task is set for him by the doctor without the patient's being told in advance what is to be done. People do not get over phobias by merely enduring a phobic situation. The reconditioning process depends on the individual's decision that hereafter he will do anything anybody else will do, provided there is a purpose in doing it. He will think in terms of the task to be accomplished, rather than what he is passing through in accomplishing it. Into this situation should be placed some interesting, pleasant, and new factors as a reconditioning helper.

A phobist is cured only when none of his phobias are active. He must never again obey even one phobia. When he does so he runs the risk, indeed the certainty, of continuing the phobic syndrome.

The third phase of treatment has been proceeding collaterally to the first and second phases, namely, helping the patient to mature, and building and strengthening the character structure. To accomplish this there must be a psychological divorce between the patient and the parent or parents to whom he is emotionally attached. He must learn to be independent, to make his own decisions and to carry an ever increasing load of responsibility with pleasure. He should travel, participate in adventurous sports, and take an active part in business, philanthropy, community affairs and social life. He must make himself walk into and participate in all forms of social and business gatherings. In such groups he does not sit in the rear of the room, he does not keep quiet, but rather he walks to the front of the room and takes an active part in whatever is going on. If the phobist has been living under unfavorable environmental conditions, the conditions must be radically altered.

The fourth phase of treatment involves consistent supervision of the patient for several months, encouraging and inspiring him to travel the new and better road he has undertaken and to develop and use his inner and surrounding resources. The physician must see to it that all sources of profit from a neurotic way of life are removed.

The important points in the reconditioning processes are:

1. The patient has sufficient confidence in the doctor to accept the statement that he will not suffer disaster and, even though uncomfortable, he will risk discomfort upon entering a situation of which he is afraid. The phobic will not do this unless a strong rapport and complete trust in the doctor exists.
2. The patient must not be allowed to defer necessary steps in treatment. The doctor understands that he is probably dissembling, finding ex-

cuses for not progressing, and even concealing from the doctor his lack of progress. Most of these patients tell the doctor they are getting along splendidly when such is not the case. Remember, usually the patient has been brought to the doctor by a member of the family and it was not of his own accord that he sought treatment.

3. He must be convinced that the doctor knows absolutely what he is talking about, has cured many other people with the same difficulty and is determined to cure him, and will let nothing stand in the way of success.

4. The job which the doctor assigns the patient must not be deferred, otherwise it arouses anxiety—causes loss of confidence, and may well become another sample of failure. The job should be outlined in detail and the patient proceed to do it at once! This project must be interesting. Conditioned reactions are best reconditioned if a pleasant factor can be introduced to dilute and, indeed, later take the place of the unpleasant fear. Some item of adventure, something new and interesting injected into the reconditioning of the phobic situation makes the person who is afraid to ride on the train ready for the adventure: "Here is \$10.00, the train leaves in 15 minutes, there is a taxi at the door—you will get on the train and you will be at your destination in only 40 minutes—go buy me a tie appropriate for this suit, bring me a papaya and three red bananas; use your time on the train thinking of what kind and color tie I should wear, what a papaya is and where you might find one and where you hope to find red bananas."—or, "Take this piece of paper (a big piece of paper and a pencil), take a certain walk alone, outline the walk, draw a map of the region, show every house, bridge and turn of the road—come back and knock on my door, give me this rough map forty minutes from now; if you are not here in 50 minutes I will get in my car and come for you." These are illustrated techniques of how the first reconditioning processes might be carried out, but only with the patient who understands the entire process, knows the nature of and how to deal with fear, and has decided he is willing to be temporarily uncomfortable if promised and helped to recovery.

Stress the *purpose* in life rather than the *overcoming of fear*: "Do not try to overcome your fear—it is an instinctive reaction and you will not succeed—but think in terms of the purpose, what it is you are trying to do. Do not force yourself to stand in the dark to overcome fear of dark—sooner or later another leaf will rustle and you will run back to safety. Instead, understanding the nature of fear and willingness to be uncomfortable, if you need to mail a letter and this necessitates walking through the dark, put your attention on the letter, walk

through the dark thinking of the letter, and mail it. Concentrate on the purpose, what the job is, rather than on how you feel."

"Walk alone, without protection. Protections are not really protective but merely a *sense* of protection. They constitute a greater risk than taking the chance alone." "You are truly a most extraordinary person. Dare to do the unusual—gamble—the failures don't count, successful ventures are all that matter. "As in a game of bridge, you will have your share of honors if you play long enough; so in life if you play purposefully you will have your share of great successes and adventure, too."

"If you fail, don't take it hard—laugh, catch your breath, turn around and try again. For example, if you are afraid to sit in the theater, get up and go out, stop, smoke a cigaret, stand about until you catch your breath, then turn around and re-enter the theater. You will find it much easier than you think and you will have turned a relative failure into success."

Summary

The patient with phobic reactions can be cured. To do so requires hard work on the part of the doctor and a fundamental desire for recovery on the part of the patient. The doctor must know the ins and outs of the phobic reactions and be thoroughly familiar with the techniques of treatment. He must be a warm, supportive individual who practices in every particular what he teaches the patient. The psychotherapist who can successfully treat the anxiety hysterics usually is sufficiently familiar with all types of neuroses to be an outstanding psychiatrist.

This type of neurosis is one of the most interesting and rewarding for the psychiatrist. The results are excellent—approximately 85 per cent of these patients can be cured. Treatment must be intensive and may require a little longer than some of the simpler types of psychoneuroses.

To get good results, one needs at least two months of intensive treatment followed by one to three years of rather intensive follow-up, being careful however that the patient does not become too dependent on the physician.

Phobic persons are usually highly intelligent; possess initiative and imagination; they will be successful in whatever they undertake, if it lies within their capacity. Reeducation teaches them to understand that their conflicts are due to immaturity and fear of failure, versus an unusually strong desire for success. The reeducational approach gives them confidence in their own ability.

In closing, let me give you a few additional suggestions which are essential if the patient is to be relieved:

1. Give him much attention. One cannot cure a

phobic by seeing him just a few times each week. Work with him in at least five one-hour appointments, every week for two months, of intensive therapy.

2. Prescribe no drugs. Do not weaken psychotherapy by giving the patient medication. If the doctor prescribes drugs during treatment, he will not cure these patients. No Miltown, no Thorazine, no Ataractics, no Dexedrine—no E.C.T.

3. If the patient is using alcohol in any form, stop it until he is completely cured, and even then he may drink only for pleasure. He may never again use alcohol as medicine. The knowledge that he may have an occasional drink once he is free of his phobia is often helpful to the patient in getting well.

4. I cannot emphasize sufficiently the absolute necessity for the doctor to be persistent. He must have force of character himself and not allow the patient to cut any corners. He must accept no compromise but stick by the treatment of the patient

until he is well and has been well for some time. The phobic individual tries to escape treatment and will try to convince the doctor that he is well when such is not the case.

5. The doctor must be perceptive—if he cannot read between the lines and does not know psychodynamics, he is wasting his and the patient's time. The treatment of the phobic is within the realm of the perceptive physician who is educated in psychodynamics and utilizes skillfully all principles of psychotherapy. To a certain extent, success depends on the personality and character of the physician himself—he must be a forceful man of integrity, understanding, kindness, as well as an inspiring leader.

6. There are times when the physician must use such strong persuasion that it approximates force. He must give the patient firm directions and see that he carries them out in order that the necessary reconditioning processes may be brought to pass.

"There are some doctors whose mere presence in the sick room does the patient good, and others who produce the opposite effect. It is neither knowledge nor scientific ability, but sympathy and understanding that win the patient's confidence and without that confidence the practitioner is indeed sadly handicapped. This is an art that cannot be taught in the lecture room nor in the ward except by example."

CRIGHTON BRAMWELL

MATERNAL MORTALITY IN CONNECTICUT— 1951-1955

*There is reason to be proud of the accomplishment
in the reduction in maternal mortality — but there
is no room for complacency —*

THIS report represents the third from the Committee to Study Maternal Mortality and Morbidity of the Connecticut State Medical Society. The first¹ (subsequently to be referred to as Report A) covered a six-year period, 1940-45; the second² (to be referred to as Report B), a five-year period, 1946-50; and the current one (Report C), a five-year period, 1951-55. Comparison of the findings in these reports presents data which offers basis for interesting discussion and speculation. There is reason to be proud of the accomplishment in the reduction in maternal mortality: Report A, 13.8 per 10,000 live births; Report B, 6.7 per 10,000 live births; Report C, 3.1 per 10,000 live births; but there is no room for complacency, as 60 per cent of deaths in the period under analysis (Report C) were considered to be preventable.

The Committee on Maternal Mortality and Morbidity of the Connecticut State Medical Society has been described in detail in a previous communication.² The committee was formed in 1946 and has continued to function effectively.

Since 1926 Connecticut has been below the national average in maternal mortality (Fig. 1). There have been minor fluctuations in the state figures which are diluted out in the national rates, probably on the basis of numbers alone. However, both show a very significant and welcome decline. In the years 1954-55 Connecticut was the sixth lowest state (Fig. 2) and was 2.2 per cent per 10,000 live births below the national average.

Classification of Maternal Deaths

In 1957 the Committee on Maternal and Child Welfare of the Council of Medical Service of the American Medical Association published a very useful and authoritative guide for maternal death studies. In this guide they defined maternal death as follows: "The death of any woman dying from

any cause whatsoever while pregnant or within 90 days of the termination of pregnancy, irrespective of the duration of the pregnancy at the time of the termination, or the method by which it was terminated." This was subdivided into three main categories: *direct obstetric causes of death* (hemorrhage, toxemia, infection, anesthesia, amniotic fluid embolism, etc.); *indirect obstetric causes of death* (cardiac disease, urinary tract disease, hepatic disease, pulmonary disease, vascular embolism, etc.); *non-related causes of death* (blood dyscrasia, malignancy, suicide, etc.). This report, quite obviously not following this classification, lumps together the direct and indirect causes of death, and considers the non-related causes of death as non-obstetrical deaths.

As an aside the authors question the placing of suicide in the non-related causes of death. In most instances of suicide associated with pregnancy, it is probably true that the precipitating factor of the final act is pregnancy and if so, suicide logically belongs in the category of indirect obstetric causes of death. Be that as it may, a standard classification for all maternal mortality committees would be tremendously advantageous and in the future, as far as is practical, all maternal mortality statistics should adhere to this well thought out new classification.

Principal Causes of Maternal Mortality

In order to make comparisons among the three reports (Fig. 3) we have again divided maternal mortality into what were the three main causes: infection, toxemia and hemorrhage. All the other obstetric causes are grouped together under Other Causes and are analyzed in detail in the next section.

Infection—The deaths due to infection have decreased absolutely as well as relatively. Infections were considered to be the cause of death in 126 patients in Report A, 36 patients in Report B, and 11 patients in Report C. Among the obstetrical deaths

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MATERNAL DEATHS ACCORDING TO PREVENTABILITY: CONNECTICUT 1951-1955

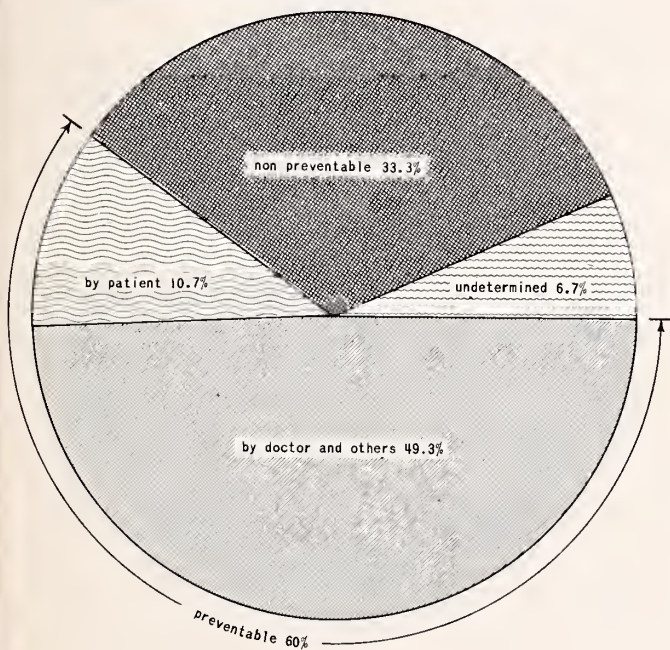


FIG. V

This trend is graphically represented in Figure 3. As may be readily seen by looking at this figure, the grouping of Other Causes (Report C) is by far larger than any *one* of the former triad which was the scourge of obstetrics. There seemed to be little doubt but that this Other Causes group would, in the foreseeable future, be larger than the triad combined. It is interesting to find that this prediction has already been reached in Connecticut, for the Other Causes group now constitutes 52 per cent of the maternal deaths. It is exceedingly likely that this trend will continue, but will undoubtedly level off in time.

The reasons for the decrease in maternal mortality as regards infection, toxemia and hemorrhage are well known to all of us, and there is very little to be gained in re-detailing them at this time. However, the fact that they are still with us gives cause for serious evaluation of our current practices. This point will be further emphasized when the matter of preventability is discussed.

Analysis of Other Causes Group

A breakdown of this group of diverse causes of obstetrical maternal mortality is presented in Table 1. Embolism occurs most commonly and will be analyzed separately. Cardiac conditions are the second most frequent. This is not unexpected, as in many similar reports heart disease is replacing or seriously competing with one of the triad as the leading cause of obstetrical maternal mortality. It is noteworthy that deaths due to anesthesia are low and that there were no deaths associated with respiratory paralysis due to conduction anesthesia. In

included in each report the percentages are 39.2, 25.9 and 14.6, respectively.

Toxemia—In Report A there were 73 deaths in association with toxemia; in Report B, 30 deaths; in Report C, 10 deaths. These constituted 22.8 per cent, 21.6 per cent and 13.3 per cent, respectively, of the total obstetrical deaths studied in each report.

Hemorrhage—Exactly the same pattern is seen as regards hemorrhage. In Report A hemorrhage was considered to be the cause of death of 103 patients; Report B, 50 patients; Report C, 15 patients. These deaths were 32.1 per cent, 35.9 per cent and 20 per cent, respectively, of the total number of obstetrical deaths analyzed in each report.

Other Causes—This miscellaneous group of obstetrical deaths has shown a steady rise, both relatively and absolutely. In Report A there were 19 deaths in this classification, which represented 5.9 per cent; in Report B, 23 deaths, or 16.6 per cent, while in Report C there were 39 deaths and the percentage rose to 52.0.

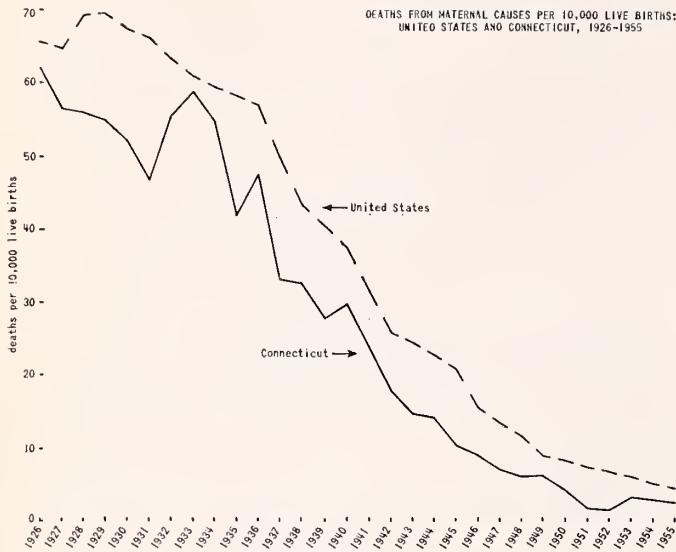


FIG. I

many reports anesthesia is assuming more importance than our data indicates.

In a recent report from the Committee on Maternal Mortality of the Texas Medical Association,³

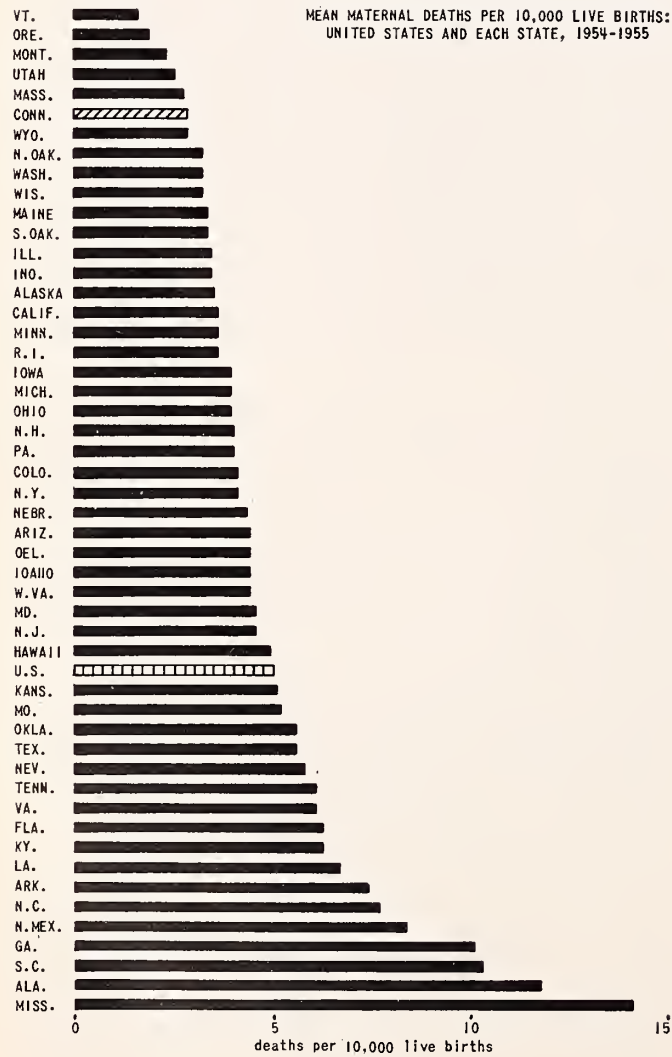


FIG. II

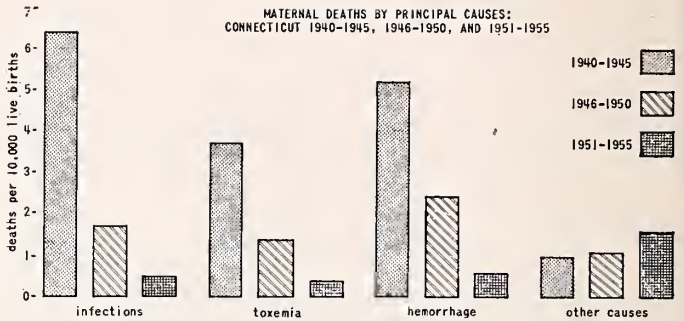


FIG. III

anesthesia was found to be the cause of maternal mortality in 5.1 per cent of the cases. Seven patients died during general anesthesia, three under spinal, two with pentothal and one with trilene and local anesthesia, the latter occurring in association with convulsions in what was obviously intravenous administration of the local anesthetic. It appears probable that the relatively high incidence of physician-administered obstetrical anesthesia in this state may be the reason for our low figures.

There is not much to be learned from the special conditions listed under Miscellaneous Causes except to remind one that diverse medical diseases can either be complicated by or complicate pregnancy.

It is regrettable that there were six instances (eight per cent) of the total of 75 in which the Maternal Mortality Committee was not presented with sufficient data to allow for an appropriate analysis. This was usually due to the paucity of physician

TABLE I
MATERNAL DEATHS DUE TO CAUSES OTHER THAN
INFECTIONS, TOXEMIAS, AND HEMORRHAGE:
CONNECTICUT, 1951-1955

CAUSE OF DEATH	NUMBER
Total	39
Embolism	14
Pulmonary	12
Amniotic Fluid	2
Heart	9
Cardiac Failure, Cause Unknown	4
Rheumatic	3
Rheumatic with Subacute Bacterial Endocarditis	1
Congenital	1
Anesthesia	2
Aspiration	2
Hepatitis, Infectious	2
Miscellaneous Causes	6
Aneurysm, Cerebral, Rupture	1
Diabetes, Coma	1
Status Epilepticus	1
Transfusion Reaction	1
Volvulus	1
Chorio-epithelioma	1
Insufficient Data	6

TABLE II
PULMONARY EMBOLISM

	GRAVID-				PRE-	AUTOP-	ORIGIN
	AGE	ITY			VENT- ABLE	SY	
1	24	2	Cesarean section for Premature Separation at 35th week, discharge on 7th postoperative day. Pain in leg on 9th day. Seen by physician—no Rx for 4 more days—died 12 hours after readmission.		P	+	Left hospital Ovarian vein.
2	36	5	4½ months pregnant—pain in chest 3 days—called physician who did not see patient. Aborted 6th hospital day. Died on 7th hospital day.		P	+	Iliac veins.
3	19	1	Died suddenly at 30 weeks pregnancy undelivered.		NP	+	No origin sought.
4	20	1	Pregnancy at 2½ months—vague symptoms + tachycardia for 2 days. Seen at home by obstetrician and internist. Dead on arrival at hospital.		NP	+	Deep veins of legs.
5	23	5	All deliveries by casarean section. Primary section followed by peritonitis—all others were extra-peritonal—Fifth section at term followed by supracervical hysterectomy. Died 2 months after last operation.		NP	+	Ovarian veins.
6	31	3	Third cesarean section—first for cephalopelvic disproportion. Marked varicose veins. Sudden death on 3rd day.		NP	+	Source?
7	40	8	Two full term pregnancies and 5 abortions— 12 weeks pregnant. Died undelivered.		NP	+	Ovarian veins.
8	42	1	Term delivery—Mild pre-eclampsia and premature separation—Spontaneous delivery 5 lb. 10 oz. baby. Died suddenly next day.		NP	+	Source?
9	24	4	Twins at 7½ months. Both died shortly after birth. Marked varicose veins. Anuria immediately postpartum—cause unknown. Output 515 cc. on 5th day. Died on 6th day.		NP	+	Pelvic veins.
10	37	?	Ectopic pregnancy—Died 8th postoperative day.		NP	o	
11	39	3	Spontaneous delivery at term. Discharged on 5th day. Tachycardia on next day. Died shortly after readmission on 7th post delivery day.		NP	o	
12	24	2	Term stillbirth delivery by low forceps. Died 3½ hours later.		NP	o	

and/or hospital records, but was sometimes due to the indifference of the physicians and/or the family of the patient involved.

Pulmonary Embolism—It is considered by the authors that the incidence of pulmonary embolism in the current report is uniquely high. The fact that nine of the 12 deaths were proven by autopsy (Table 11) lends credence to this seemingly unusual data. The committee considered that only two of these deaths were preventable. In both instances the physician was alerted by the patient and there was remarkable delay in either seeing the patient and/or the instigation of specific therapy. Pain in the chest seemed to be the presenting symptom in one patient, and pain in the leg in the other. The source of the pulmonary embolism was considered by the pathologist to be established in six instances. The ovarian veins were primarily involved in three cases, and the iliac veins, pelvic veins and deep veins of the leg were incriminated in the others. Autopsy did not reveal the source of the pulmonary embolism in two instances, and in one it apparently was not sought by the pathologist.

Only time will tell whether this remarkable incidence of pulmonary embolism will be found in other recent studies. In any case, it does seem that for the

foreseeable future the obstetrician should be more alert to the prodromal symptoms of thrombophlebitis and consider active therapy earlier than he has in the past. The data is not conclusive as regards the presence or absence of varicose veins. However, when this was mentioned in the material presented to the Maternal Mortality Committee it was included in the table. By no means does this indicate a true correlation between the incidence of varicose veins of the leg and pulmonary embolism.

Amniotic fluid embolism was found in two instances and both of these were proven by autopsy.

Non-Obstetrical Cases by Cause of Death

Table III lists the non-obstetrical causes of death for the three periods concerned. The data is again presented in the same form that it was in the previous reports. It is worthwhile to note that in Report A there were 54 deaths; Report B, 48 deaths, and in Report C, 32 deaths.

The authors are not aware of any blanket explanation for the significant reduction in non-obstetrical deaths. It is apparent, however, that in isolated instances some satisfactory explanation might well be present. It is interesting that the drop in deaths as

TABLE III
NONMATERNAL CASES BY CAUSE OF DEATH: CONNECTICUT

CAUSE OF DEATH	1940	1946	1951
	1945	1950	1955
All causes	54	48	32
Infective and parasitic diseases*	6	5	5
Neoplasms	6	6	4
Diseases of the blood and blood forming organs	4	1	3
Diseases of the central nervous system and sense organs	4	4	3
Diseases of the circulatory system	15	15	7
Diseases of the respiratory system	6	2	3
Diseases of the digestive system	7	4	2
Diseases of the genito-urinary system	3	3	3
Congenital malformations	0	1	1
Symptoms, senility and ill-defined conditions	0	2	0
Accidents, poisonings, and violence	3	5	1

* International classification of diseases 1955 revision.

signed to the circulatory system between Report B and Report C is over 50 per cent. This might well be due to an increased awareness on the part of both the public and the physician of the importance of cardiac complications in association with pregnancy. Possibly also, early and active treatment of the cardiac condition may be of major significance. One wonders whether cardiac surgery has been a factor. The data shows a consistent decrease in diseases of the digestive system as related to maternal mortality. However, no other significant trends seem to be noted in a perusal of this table.

The percentage distribution of adjudged obstetrical and non-obstetrical deaths amongst several maternal mortality studies works out to be roughly two-thirds obstetrical and one-third non-obstetrical (Table IV).^{4,5} At times it is somewhat difficult to be certain that one is justified in classifying a particular case in one category or the other, but the above figures tend to show that there is good general agreement amongst the various reports. Jewett,⁶ in

TABLE IV
PERCENTAGE DISTRIBUTION OF OBSTETRICAL AND NON-OBSTETRICAL DEATHS IN VARIOUS STUDIES

	NUMBER OF DEATHS	TOTAL OBSTETRICAL PERCENTAGE	NON-OBSTETRICAL PERCENTAGE
Connecticut			
1946-50	187	68.9	31.1
Connecticut			
1951-55	107	70.0	30.0
Brooklyn			
1949-56	403	66.7	33.3
Minnesota			
1950	68	67.6	32.4
1951	57	68.4	31.6
1952	58	56.9	43.1

a recent article, brings up a very cogent point as regards the completeness of the material for analysis by the Maternal Mortality Committee in Massachusetts. He pointed out that of the 64 maternal mortality cases in that state in 1954, nine were known only to the Division of Vital Statistics and not to the Maternal Mortality Committee; whereas, 28 were known to the Maternal Mortality Committee and were not picked up by the Division of Vital Statistics, and that 27 were known to both.

It is not known by the authors whether such a condition exists in Connecticut. Prior to 1951 the individual hospitals in the state reported maternal mortality cases directly to the Maternal and Child Hygiene Section of the Connecticut State Department of Health and the Vital Statistics Section made periodic checks with the Maternal and Child Hygiene Section to ascertain non-reporting of cases by individual hospitals. Since 1951 the hospital reporting has been discontinued and the Vital Statistics Section notifies the Maternal and Child Hygiene Section of deaths reported with conditions of pregnancy and the puerperium as a direct cause of death or as an associated condition. They also check all known deaths of women among the ages 14 to 45 and report selected questionable cases to the Maternal and Child Hygiene Section for investigation. However, to the knowledge of the members of the Committee, no known case of maternal mortality has occurred in this state that has not been picked up by the Vital Statistics Section.

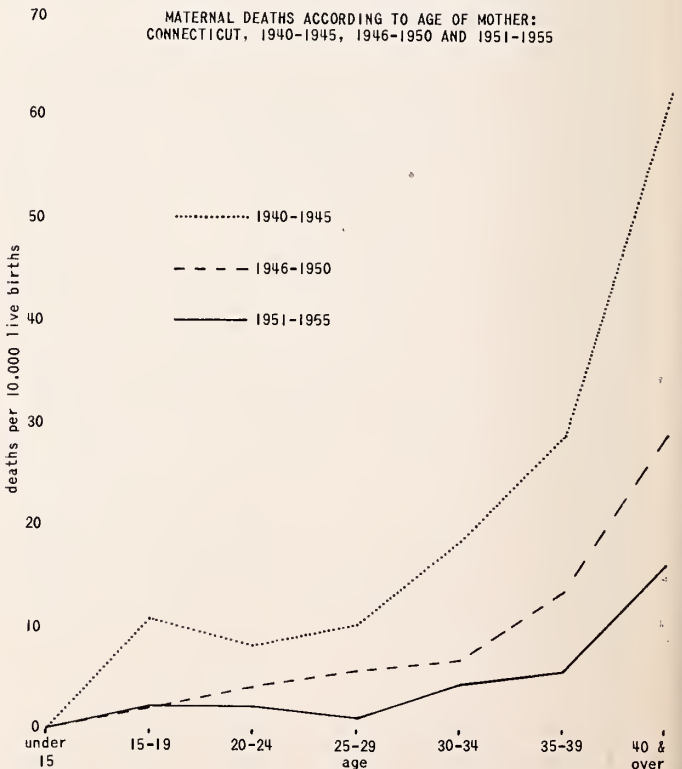


FIG. IV

TABLE V
MATERNAL DEATHS ACCORDING TO AGE OF MOTHER

AGE	1940-1945		1946-1950		1951-1955	
	AVERAGE AN-		AVERAGE AN-		AVERAGE AN-	
	NUAL RATE PER 10,000 NO. LIVE BIRTHS		NUAL RATE PER 10,000 NO. LIVE BIRTHS		NUAL RATE PER 10,000 NO. LIVE BIRTHS	
All Ages	321	13.8	139	6.7	75	3.1
Under 15 years	0	0.0	0	0.0	0	0.0
15-19 years	12	10.9	2	2.1	3	2.4
20-24 years	56	8.2	25	4.3	15	2.3
25-29 years	81	10.2	41	5.8	9	1.1
30-34 years	89	18.5	31	6.8	25	4.6
35-39 years	59	28.8	27	13.6	14	5.8
40 and over	24	62.2	13	28.8	9	16.2

**Correlation of Maternal Mortality—
Age of Mother**

It has been traditional for studies of this type to show a direct relationship between maternal mortality and age of mother. As a rule, the risk of dying during pregnancy and childbirth is high in the teen-age period, lowest in ages 20 to 29 years, and thereafter increases sharply with advancing age of the mother. This relationship appears with slight variations in all the three periods of our study (Fig. 4). Age differentials in mortality rates still persist in Connecticut although the magnitude has been somewhat altered from period A to B and B to C (Table V). For Report A the maternal mortality rates for women 40 years of age or over are 7.3 times that of the 20-24 year group; for Report B, the same relationship is 6.7; for Report C, 7. When comparing the 35-39 year group to the 15-19 year group for the three periods one finds that the maternal mortality in the 35-39 year group is 2.6, 5.7 and 2.4 times the 15-19 year group for Report A, B, C, respectively. Surely the above data convincingly points out that there is no room for letting down our vigilance when dealing with the so-called elderly obstetrical patient.

There were 75 maternal deaths in period C or a maternal death rate of 3.1 per 10,000 live births. From period B to C the number of maternal deaths

decline 46.0 per cent while the rate decreased 53.7 per cent.

Barring one exception, declines in maternal mortality occurred among mothers of all ages in the periods covered in Report B to C. Absolute declines in age-specific death rates were greatest for the 30 years and over groups, where the levels of mortality were originally highest. The largest per cent decline occurred for mothers 25 to 29 years of age. The death rate of 1.1 per 10,000 live births for this particular age group in Report C represents the lowest in the record for Connecticut and constitutes an 80.0 per cent decline from the period covered by Report A.

The data for the teen-age mother is much less clear cut in its support of the above mentioned dictum. This is probably due to the relatively small numbers of patients with which we are dealing.

**Correlation of Cause of Maternal Deaths—
Age of Parity of the Mother**

Again we see that it is the primiparous patient who constitutes a major obstetrical hazard (Table VI). Sixty per cent of the toxemias were in primiparae. However, they were not, as one might expect, in the younger group. They were distributed by age disproportionately in the higher age group (Table VII) and there were no deaths associated with toxemia in any patient under 20 years of age.

There did not seem to be any characteristic spread as regards age for infection. Nine of the eleven deaths caused by infection occurred in gravida 3 or less. Only two of these deaths were obviously in association with induced abortion.

Hemorrhage distribution according to age and parity was not remarkable except that there were only two in the para 5's and 6's or more. It is usually considered that hemorrhage is more common in the grand multipara, especially due to postpartum hemorrhage. As regards age, there was a high concentration in the 30-34 year period. The reasons for this do not seem apparent.

TABLE VI
MATERNAL DEATHS ACCORDING TO CAUSE OF DEATH AND PARITY OF MOTHER:
CONNECTICUT, 1951-1955

CAUSE OF DEATH	PARITY OF MOTHER								
	ALL PARITIES	PARA 0	PARA 1	PARA 2	PARA 3	PARA 4	PARA 5	PARA 6+	NOT STATED
All Causes	75	23	14	11	9	5	4	1	8
Infections	11	3	3	3	0	1	0	0	1
Toxemias	10	6	0	2	1	1	0	0	0
Hemorrhage	15	3	3	2	3	0	1	1	2
Other Causes	39	11	8	4	5	3	3	0	5
Pulmonary Embolism	12	5	1	1	3	0	1	0	1
Heart Disease	9	1	4	0	2	1	0	0	1
Miscellaneous	18	5	3	3	0	2	2	0	3

TABLE VII
MATERNAL DEATHS ACCORDING TO CAUSE OF DEATH AND AGE OF MOTHER:
CONNECTICUT, 1951-1955

CAUSE OF DEATH	AGE OF MOTHER							
	ALL AGES	UNDER 15	15-19	20-24	25-29	30-34	35-39	40+
All Causes	75	0	3	15	9	25	14	9
Infections	11	0	2	2	1	3	2	1
Toxemias	10	0	0	1	2	3	2	2
Hemorrhage	15	0	0	3	2	6	2	2
Other Causes	39	0	1	9	4	13	8	4
Pulmonary Embolism	12	0	1	4	1	0	3	2
Heart Disease	9	0	0	1	1	7	0	0
Miscellaneous	18	0	0	4	2	6	5	2

There was a somewhat higher concentration of pulmonary embolism in the primiparous patient. The highest age bracket is the 20-24 year period, and again in the 35-39 year period. It might be assumed that pulmonary embolism would be somewhat more common in the older age group, but we do not know why the 20-24 year period is high.

As regards heart disease there is a significant age concentration, seven out of nine being in the 30-34 year period. A possibly incidental factor is that four of the nine deaths occurred in patients pregnant for the second time. It is questionable whether the casualness of the patient or the physician could possibly be important here in assuming that *if* the patient got by on the first pregnancy, then the cardiac condition might not be as bad as was originally suspected.

In the miscellaneous group there is an increased spread in the older age group, with some concentration in women of lower parity. This is probably explainable on the basis that there is an increased chance for significant disease to occur in women in the latter part of their reproductive epoch and that such women might, theoretically, have a lower fertility potential.

Number of Autopsies

There were 47 autopsies among the 75 maternal mortalities included in this report (Table VIII). The autopsy percentage is 62.6. This seems to the authors to be commendable, but again does not allow for complacency, as this percentage should and can be increased. Percentage of autopsies was quite satisfactory in the infection and hemorrhage cases. As regards toxemia there were only four out of 10. This is perhaps in association with the number of toxemias which were considered preventable and were patient-assigned as a principal preventable factor. This is the type of patient from whose family it might be very hard to obtain permission for a post-mortem examination.

In the Other Cause group, the only diagnosis where there was a satisfactory percentage of autop-

sies was in association with pulmonary embolism. Again, this might be expected on the basis of a catastrophic situation and therefore relatively easy autopsy permission. It is largely in toxemia, cardiac and miscellaneous areas that there is a distinct need for an increased percentage of autopsies.

Preventability—Non-Preventability

The Maternal Mortality Committee has adopted a middle-of-the-road policy in assigning preventability in the reviewed cases. For example, while from a strictly theoretical point of view, any maternal death due to hemorrhage is preventable, the

TABLE VIII
NUMBER OF AUTOPSIES PERFORMED ACCORDING TO
CAUSE OF MATERNAL DEATH:
CONNECTICUT, 1951-1955

CAUSE OF DEATH	NUMBER OF DEATHS	NUMBER OF AUTOPSIES
All Causes	75	47
Infections	11	10
Toxemias	10	4
Hemorrhage	15	13
Other Causes	39	20
Heart	9	3
Cardiac failure, cause unknown	4	1
Rheumatic	3	0
Rheumatic with Subacute Bacterial Endocarditis	1	1
Congenital	1	1
Anesthesia	2	1
Embolism	14	11
Pulmonary	12	9
Amniotic Fluid	2	2
Hepatitis, infectious	2	1
Miscellaneous	6	2
Aneurysm, cerebral, rupture	1	0
Volvulus	1	0
Transfusion reaction	1	1
Diabetes, coma	1	0
Satus Epilepticus	1	0
Chorio-epithelioma	1	1
Insufficient Data	6	2

Committee has not taken this dogmatic attitude and has only assigned preventability to those instances where, in their opinion, there was no question of practical preventability. Again, theoretically, death from toxemia is always preventable if adequate prenatal care and early instigation of corrective measures are satisfactorily carried out. However, the Committee has only assigned preventability to the patient when she obtained no prenatal care or to the physician when he really failed to treat actively the signs and symptoms of impending trouble.

Most lay people and many physicians assume that chemotherapy and antibiotic treatment have eliminated the danger of infection. The fact that maternal deaths due to infection still occur is evidence that this casual attitude is in error. The percentage of infections in association with criminal abortion is less, but this still occurs. There were only two deaths due to infection in association with criminal abortions in the period covered by this report. Early vigorous and well planned therapy will solve the problems in many obstetrical infections. However, "shot-gun" therapy, inadequate therapy or therapy too late, very frequently will not. The Committee has assigned physician-preventability as regards infection only when in their opinion improper or inadequate measures were instituted.

The percentage of preventability (Fig. 5) has been given for Report C. Preventability and non-preventability was not determined in Report A. Therefore, we can only compare Report B with the current report. Non-preventability in Report B was 50 per cent; in Report C, 33 1/3 per cent. The preventability was undetermined in Report B in three per cent of the cases, and in Report C, 6.7 per cent. Preventability in Report B considered due to doctor or other causes was 33 1/3 per cent, and to the patient, 14 per cent. In Report C the doctor and others were thought responsible in 49.3 per cent and the patient in 14 per cent.

It is more than likely that the reason for the change in the figures with an increasing responsibility assigned to the physician is the change in personnel and attitude of the committee as time has progressed. This must mean that the Committee is raising its standards and has a clearer conception of its responsibility. This is all for the good. It should not be interpreted as meaning that there is a higher percentage of inadequate obstetrics being practiced in this state. If the effort put in by the Committee is to pay any real lasting dividends it must be along the lines that are depicted in this graph. Increasing patient education will help, but there is no question that the major emphasis must be played by the individual physician and the hospital obstetrical staff.

Data has not been presented to support the contention that there is a greater percentage of obstetri-

TABLE IX
CORRELATION OF PREVENTABILITY AND NON-PREVENTABILITY
IN MATERNAL MORTALITY
CONNECTICUT 1951-1955

CAUSE OF DEATH	NO. OF PATIENTS	PREVENTABLE		TOTAL PREVENTABLE
		M.D. & OTHERS	PATIENT	
All Causes	75	37 (49.3%)	8 (10.7%)	45 (60%)
Infection	11	7 (64%)	3 (27%)	10 (91%)
Toxemia	10	6 (60%)	2 (20%)	8 (80%)
Hemorrhage	15	11 (73%)	2 (13%)	13 (86%)
Other Causes	39	13 (30%)	1 (3%)	14 (33%)

cal deaths among people of lower economic status. The authors are sure this is the situation and urge more active use of the public health nurse to insure adequate prenatal care. An ever increasing awareness of the problem and the search for early signs and symptoms of impending trouble are paramount. There were very few instances in which the Committee thought the physician responsible where there were not ample signs and symptoms which failed to impress the physician. More often than not it was failure to read the picture correctly as it was developing and again, the old bugaboo of inadequate treatment—too little and too late. If the authors may be allowed to make a seemingly trite but very true statement: One cannot make a diagnosis unless one thinks of it. In several instances it seemed more than likely that the physician was not aware of impending trouble because it just did not occur to him that such a catastrophic outcome could happen to him or his patient. An ever present awareness of potential trouble when dealing with obstetrical patients and early and vigorous treatment thereof will precipitously reduce the number of obstetrical deaths in the adjudged preventable category.

The above philosophy is impressive when one does a detailed analysis of the major causes of maternal mortality (Table IX). In infection 64 per cent of the deaths were considered preventable by the physician and 27 per cent by the patient. When we consider toxemia the story is essentially the same, in that six out of 10, or 60 per cent of the deaths were considered preventable by the physician and two, or 20 per cent by the patient, for a total of 80 per cent. Again, hemorrhage has the same figures, with 11 out of 15 being considered preventable as regards physician, and patient, 13 per cent. Therefore, the committee considered obstetrical mortality as preventable when caused by the triad of *infection*, *toxemia* and *hemorrhage* in over 80 per cent of the instances. When one considers the *Other Causes* of obstetrical mortality the percentage of preventability is quite markedly less, in that only 30 per cent were considered physician-preventable and three per cent patient-preventable, or a total of 14 patients, or

33 1/3 per cent. Obviously these figures are small, but certainly are highly significant, again pointing out that it is with the old obstacles to good obstetrics—infection, toxemia and hemorrhage, that we have the greatest challenge to reduce our obstetrical mortality.

We wish to pay tribute to the several obstetricians who have served on the Committee on Maternal Mortality and Morbidity and who, over the years, have given willingly and generously of their time and effort to make such a report as this possible.

Dr. Louis Spekter, of the Maternal and Child Hygiene Section of the Connecticut State Department of Health, has been a tower of strength to the Committee.

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"Even in speaking to friends, it is desirable whenever possible to give them some hope to cling to, for the human side of the physician's work does not end with the patient. It is his duty to bring whatever comfort he can to the relatives. There is a tale told of a famous English physician, who with two other well known specialists, was called to see a man dying of uremia. His two colleagues said that the patient would not live through the night, but he told the relatives that, although he was afraid that his colleagues were right, he himself felt there might be a possible chance. The patient died that night and next morning when the family doctor asked the relatives which of the three consultants they had liked best of all, without hesitation, said: "... of course; he was the only one who gave us any hope'."

CRIGHTON BRAMWELL

THE GENUS BACTEROIDES

Taxonomy and significance in Obstetrics and Gynecology

This review forcibly delineates the difficulties of proper classification and the variety of infections from which Bacteroides may be grown.

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Introduction

A BASIC bacteriologic problem of major importance in Obstetrics and Gynecology is the development of methods of species identification of the non-spore forming obligate anaerobic bacteria.

Since the discovery of chemotherapeutic and antibiotic agents remarkable progress has been made in the treatment of many of the infections caused by aerobic bacteria. During this same period there has been no comparable advance in the treatment of anaerobic infections.

Non-sporulating anaerobic bacteria inhabit the vagina of women with and without evidence of vaginal infection. It is therefore, not surprising in obstetric and gynecologic patients when routine anaerobic cultures are done, that anaerobic bacteria are found as primary or secondary organisms in most infectious processes.

Prior to the time of antibiotic therapy mortality in obstetric and gynecologic patients primarily due to infections, was caused by aerobic bacteria or by anaerobic sporulating *Clostridia*. With specific therapy there has been a marked decrease in mortality. However there also has been an increasing recognition of the importance of the non-sporulating anaerobic bacteria as factors in morbidity and mortality.

The non-spore forming anaerobic bacteria are a group of obligate anaerobes which inhabit the intestinal and genital tracts and which probably inhabit the upper respiratory tract. Within this group are gram positive, gram negative and gram variable cocci and bacilli of varying morphology. Although

infections with single organisms occur, characteristically these bacteria produce symbiotic infections. Many strains, or symbiotic mixtures, produce gas and a foul odor in vitro. In vivo, the odor associated with certain types of clinical infections is commonly due to non-sporulating anaerobic bacteria.

In obstetric and gynecologic infections mixed anaerobic infections are the rule, and there are numerous well documented reports of bacteremia and death due to the so-called "pleomorphic" non-sporulating, anaerobic gram negative bacilli. The majority of these infections occurs commonly in obstetric and gynecologic patients with inflammatory diseases in their many forms.

Bergey¹ places the non-spore forming, anaerobic gram negative bacilli in the genus *Bacteroides* in the order *Eubacteriales* Buchanan, under the family *Parvobacteriaceae*, with the tribe designated *Bacteroidae* Breed, Murray and Hitchens. The genus *Bacteroides* Castellani and Chalmers 1919, is defined as obligate anaerobic rods which do not form endospores, which are gram negative and which for growth may or may not require enriched media. This generic grouping is broad and includes pleomorphic strains, strains not regarded as pleomorphic and motile and capsulated strains. The type species is the non-pleomorphic *Bacteroides fragilis* (Veillon and Zuber) Castellani and Chalmers 1919. Twenty-three species are recognized by Bergey, 16 of which were isolated from normal stools and described by Eggerth and Gagnon² in 1933. Bergey regards the grouping as tentative since some of the organisms

which were given species rank had not been subjected to critical study.

The most important species of the genus *Bacteroides*, is the pleomorphic *B. funduliformis* (Halle) Bergey et al. This organism was first described in 1898 by Halle³ and was cultured from the healthy vaginas of humans, from retained placentas and from Bartholin abscesses. Bergey regards all the so-called "pleomorphic" strains from human and animal sources as one species, *funduliformis* Halle 1898.

There seems to be little question that the organism regarded as *B. funduliformis* is a relatively large group of bacilli with major differences in morphology, pathogenicity and other characteristics. Clinically this is supported by the fact that there is little correlation between the severity of the infection and the isolation of organisms of the type considered to be *B. funduliformis*. Exceptions appear to be patients who develop bacteremia. Whether the type of bacteremia reported is due to a single species has not been satisfactorily settled.

A second system of taxonomy is advocated by Prevot⁴ in his *Manuel de Classification et de Détermination des Bactériés Anaérobies*. He takes into account the marked differences in the *funduliformis* type organisms and separates them into a number of different species. Prevot places all of the pleomorphic *Bacteroides* of Bergey, isolated from human and animals, in the order *Actinomycetales*. Since some strains show evidence of branching he believes them related to the *actinomycetes*. Under the family *Spherothoraceae* Prevot 1938, there are two genera which are regarded by Bergey as *Bacteroides funduliformis* (Halle) Bergey et al. The first and most important is the genus *Spherothorus* Prevot 1938, which contains 17 species and includes the *funduliformis* organism of Halle. Prevot creates a second genus, the *Spherothorus*, for three reportedly motile species.

Most severe infections in humans are produced by pleomorphic strains and this group is of most concern to the medical bacteriologist. If all such strains isolated are one species, the organism has been placed at different times and by different investigators in the genera *Bacillus*, *Actinomyces*, *Streptothrix*, *Corynebacterium* and *Fusiformis*. If *Spherothorus* Prevot 1938, *Spherothorus* Prevot 1938 and *Bacteroides* Castellani and Chalmers 1919 are excluded, Table I lists the synonymous terms found in the literature by Dack⁵ in 1940.

It must be kept in mind that the two taxonomic systems discussed are based on organisms described by various investigators. The multiplicity of names is evidence of confusion in their isolation and identification. Of the two methods of grouping, Prevot's seems the more logical since in our experience

TABLE I
SYNONYMOUS TERMS
Listed by Dack.

<i>Bacillus</i> of Schmorl (Weinberg et al.)
<i>Bacillus necrophorus</i> (Flugge)
<i>Actinomyces necrophorus</i> (Bergey, 1930)
<i>Bacillus necrosus</i> (Jensen)
<i>Bacillus diphtheriae vitulorum</i> (Flugge)
<i>Bacillus filiformis</i> (Schutz)
<i>Nekrosebacillus</i> (Bang)
<i>Streptothrix cuniculi</i> (Schmorl)
<i>Actinomyces cuniculi</i> (Gasperini)
<i>Bacillus necroseos</i> (Salomonson)
<i>Bacillus des Kalbernoma</i> (Ritter)
<i>Streptothrix necrophora</i> (Kitt)
<i>Corynebacterium necrophorum</i> (Lehmann and Neumann)
<i>Fusiformis necrophorus</i> (Topley and Wilson)
<i>Corynebacterium de la necrose</i> (Hornbach)
Espece C (Veillon and Zuber)
<i>Bacterium funduliforme</i>
<i>Bacillus funduliformis</i>
<i>Bacillus thetoides</i> (Rist and Guillemot)

the pleomorphic group shows marked differences in morphology, pathogenicity and physiology.

There have been no systemic studies made of the bacteriology of the pleomorphic *Bacteroides* isolated from the vagina or from major or minor infections in obstetric and gynecologic patients. Our experience suggests a number of species or varieties of species of both pleomorphic and non-pleomorphic strains. The identification of a single strain is a research problem of little value without more knowledge of the group.

History

The pleomorphic *Bacteroides* produce a variety of lesions in animals and are better known to veterinary than to medical bacteriologists. *Spherothorus necrophorus* (Schmorl), the type species of Prevot's *Spherothorus* genus, was isolated in 1891 from necrotic mucosal lesions in rabbits. As early as 1884 Dammon⁶ found similar organisms in the lesions of calf diphtheria. Although human and animal strains are placed in the same species by Bergey, it has been demonstrated that strains isolated from humans are not pathogenic for laboratory animals whereas animal strains produce spreading necrotic lesions in rabbits, in guinea pigs and in other animals. One year prior to Halle's description of *B. funduliformis*, Veillon and Zuber⁷ described an organism which was similar to *B. funduliformis* and designated it species C.

Following these original reports there were only sporadic reports^{8,9} until Harris and Brown¹⁰ in 1927 reported six patients with severe postpartum infections due to pleomorphic *Bacteroides*. In this series there was one death and the organism was recovered at necropsy.

In the 1930's, Cunningham¹¹ Teissier et al.,¹² and Thompson and Beaver,¹³ reported patients with *Bacteroides* septicemia and with severe infections which caused death. Thompson and Beaver¹³ stated they were able to find 10 patients reported who had this type of septicemia and stated that all 10 succumbed to the infection.

From 1932 until 1949 there are additional case reports by Cohen¹⁴ 1932, Shaw¹⁵ 1933, Pham Hu Chi¹⁶ Henthorne et al.,¹⁷ 1936, Lemierre¹⁸ 1936, Dixon and Deuterman¹⁹ 1937, Brown et al.²⁰ 1941, Smith and Ropes²¹ 1945, Ruys²² 1947 and Beigelman and Rantz²³ 1949.

In 1951 Carter et al.,²⁴ in reporting 133 patients with pyometra noted that 41 of the reported patients had mixed anaerobic infections which included anaerobic, gram negative, non-sporulating bacilli belonging to the genus *Bacteroides*.

In 1952 McVay and Sprunt²⁵ reported 35 patients with *Bacteroides* infections. There were 11 deaths in the series and 21 patients were regarded as severely ill. In the same year Clark and Weirsmas²⁶ reported 47 patients with *Bacteroides* infections but none died.

In 1953 Carter et al.,²⁷ reported 153 obstetric and gynecologic patients from whom strains of *Bacteroides* were isolated. All of the patients had pelvic abscesses at abdominal operations for neoplasms or infections, pelvic abscesses drained by colpotomies, bacteremia, pyometra or abscesses from which material could be obtained relatively free of contamination. Not included were patients with postpartum or postabortal positive lochial or cervical cultures who did not have bacteremia or abscess formation.

Strains of *Bacteroides* were isolated from 12 patients in pure culture. In 78 patients they were associated with other anaerobes. In 63 patients there was a mixture of *Bacteroides*, other anaerobes and aerobic organisms. Twenty-seven of the strains of *Bacteroides* were regarded as pleomorphic and of the *funduliformis* type. Within the group of patients there was 13 deaths. It was not suggested that the *Bacteroides* infection was the actual cause of death in all 13 patients. The infections, however, were real contributory factors. Three of the patients who died had bacteremia.

Discussion

Anaerobic bacteria play a major role in all types of infections seen in obstetric and gynecologic patients. Antibiotic therapy is less effective in anaerobic infections and further detailed studies of the organisms must be done before any valid conclusions can be made.

The pleomorphic *Bacteroides*, can under certain conditions, despite antibiotic and chemotherapeutic

agents, produce fulminating bacteremia and death.

The following case reports may illustrate the importance of *Bacteroides* in obstetric and gynecologic patients.

CASE REPORT 1.

Death due to infected abortion.

A 19 year old negress (A-18617), married, para 3-2-1, was admitted irrational and critically ill. No history could be obtained from the patient. The members of her family stated that 13 days prior to admission she had developed fever and symptoms which were considered to be due to influenza. Nine days prior to admission she developed photophobia and a generalized rash appeared over her body. Five days prior to admission she passed a small fetus and "some tissue." Excessive bleeding was denied. No admission of attempted abortion could be elicited. The fever continued and she became irrational. There was a foul odor to her uterine discharges.

On admission the fever was 39.8° C. and she was irrational. Her pulse rate was 126 and the respiratory rate was 28. The hemoglobin was 22 per cent. The white cell count was 11,600. There was no jaundice. There was pelvic peritonitis. Within 20 hours a severe jaundice developed. She was given 1,250 cc. of whole blood without reaction. The meningeal symptoms were pronounced and a lumbar puncture was done. The fluid was normal and cultures of the fluid showed no growth. Roentgenogram of the lungs was negative.

The fever ranged between 39.8° to 41° C. The blood and uterine cultures were positive for anaerobic cocci and for *Bacteroides*. The jaundice intensified; the pulse was 140 per minute. She died 44 hours after admission of the overwhelming infection. Necropsy could not be obtained.

CASE REPORT 2.

Death due to abdominal pregnancy.

The patient, (C-98771), a negress, age 25, married, para 1-1-0, was admitted critically ill. She had experienced abdominal pain for three months. From the history and findings on examination the diagnosis of abdominal pregnancy of duration four to five months was made. She had high fever, 39.3° C, a pulse rate of 115 and a respiratory rate of 28. Her hemoglobin was 40 per cent. She showed findings of hemoperitoneum and of generalized peritonitis. She had hypertensive cardiovascular renal disease and was grossly obese.

The blood culture on admission showed no growth.

She received transfusions for a total of 2,500 cc. on admission and during the operation.

At operation a pregnancy of five months was found. The placenta was attached on the posterior surface of the uterus and on the posterior leaf of the right broad ligament. The fetus was dead. Cultures taken from the pregnancy site showed no growth of *Bacteroides*.

During the 12 postoperative days she lived the fever ranged from 38°C to 40°C. She was given 2,500 cc. of whole blood by multiple transfusions. She received 300,000 units of crysticillin daily.

On the sixth postoperative day the blood cultures were positive for *Bacteroides*. The crysticillin was continued and daily she was also given two gm. of aureomycin and two gm. of streptomycin.

She died on the twelfth postoperative day. Necropsy showed profound central change and congestion of the liver; portal and sinus hepatitis; subacute peritonitis; bilateral pulmonary edema; cardiac dilatation; cloudy swelling of the kidney epithelium; congestive splenomegaly.

CASE REPORT 3.

Pelvic Abscess.

The patient (C-58787) was a negress, age 33 years, para 6-1-5, who was admitted critically ill with a diagnosis of pelvic abscess. A posterior colpotomy drained 250 cc. of foul smelling pus. The cultures showed anaerobic streptococci, diphtheroid bacilli and *Bacteroides*.

For 30 days postoperatively she had fever from 38°C to 40°C. and the pulse rate was from 100 to 120. Despite daily doses of 400,000 to 900,000 units

of penicillin, the signs of pelvic peritonitis continued and were increasing in severity. Jaundice developed. The liver was large and tender. The serum bilirubin was 29 mg. per 100 cc. on the seventh postoperative day.

She was given 3,000 cc. of whole blood during her hospital stay. Streptomycin and Aureomycin were added to the penicillin therapy.

Improvement was slow. Drainage from the pelvis was good.

The patient was discharged on the thirty-eighth postoperative day.

Summary

The important literature on *Bacteroides* infections has been reviewed.

This review forcibly delineates the difficulties of proper classification and the variety of infections from which *Bacteroides* may be grown.

The necessity for anaerobic cultures as well as for aerobic cultures, in infections in obstetrics and gynecology is evident.

At the present time we have no specific antibiotic or chemotherapeutic agents for infections with *Bacteroides*.

Proper and prolonged experimental work with these organisms should be done. This work might permit better understanding of the anaerobic organisms and might lead to some form of specific therapy for these infections which can be of major importance, as well as of minor importance in obstetric and gynecologic patients.

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Surgical Treatment Of Ulcers

In my opinion gastrectomy of the Billroth I type for gastric perforated ulcer and of the Billroth II type (Rydygier method) for duodenal perforated ulcer are the procedures of choice," says Dr. Andrew W. Mieszczanski, Sulkowicka, Poland. "The Moynikan Henle interloop type of gastrectomy may become the procedure of choice in the future, but as yet we have too little experience with it."

Gastrectomy for perforated gastric and duodenal ulcer, advocated by J. Glatzel 36 years ago after he performed it for the first time, in 1918, still has no unanimous support. "Many surgeons merely suture every perforated ulcer, even those in the stenogenic area." In an average of statistics taken at seven large surgical centers, the mortality rate was 5.17 per cent in patients who underwent partial gastrectomy and 19.7 per cent in those who were sutured. Additional statistics reveal that late results were bad in 60 per cent of patients in whom the perforated ulcer was sutured. Late results included recurrence of bleeding, secondary perforation, "and a 20 per cent new growth development at the site of the suture." These are "very convincing arguments for resection."

Suture of the perforation is a palliative measure. A secondary procedure often is difficult. With proper premedication and preparation of the patient and proper anesthesia and postoperative care, the emergency gastrectomy "is usually amazingly well tolerated." In a group of 42 of the author's patients, "the average characteristics of recovery, mortality, febrile response, return of peristalsis, period of hospitalization, and so forth" were comparable to those in a group of 40 planned gastrectomies. (*Surgery* 45:527, March, 1959.)

The Pre-Operative Social Service Interview:

Psychological Implications of Hysterectomy

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Twenty women, advised to have a hysterectomy, were seen by a social worker in single intake interviews. The need to express anxieties about themselves and the operation was sufficiently great to enable them to draw benefit from this chance to share their concerns with another woman. A study of these interviews suggests that wider recognition should be given by general hospitals to the need of providing clinic patients with an opportunity to expose normal fears or unusual pre-operative tension.

WHEN a condition is found in the gynecologic clinic that demands hysterectomy, the resident surgeon explains as simply as possible the diagnosis and the advised operative procedure. A few patients accept the news with apparent relief:—"I've known something was wrong." More often, however, the connotations of the words "operation" and "hysterectomy" induce an emotional black-out in which all further explanations and reassurances are rejected. There is little time in a busy clinic to allow for adequate recovery from this state, and misunderstandings associated with the shocking news often remain uncorrected.

It therefore seemed worthwhile for one of us (HSR) to record the reactions of a selected group of patients who had been advised to undergo a routine gynecologic operation. The opportunity to do so arose during an investigation of the influence of emotional factors on the recovery from hysterectomy for benign uterine disease.* Other aspects of this study have been previously reported.^{1,2} These women were seen before admission with the purpose of giving them a chance to talk freely about their proposed hospital experience. In the belief that any operation on the reproductive organs strikes deeply at a woman's psychological integrity, the availability of psychiatric support as well as social service aid was offered in every case. It was further hoped that within the framework of these talks a prognostic assessment of the quality of recovery from hysterectomy might be made. These women were seen as soon as possible after they had been informed by the

surgeon of the proposed operative procedure. It was necessary to permit each to come to an awareness, on some level, of her own real feelings and of the existence of resources to give her help if she needed it. Since most of them seemed to be experiencing a sense of child-like panic in the face of what they appeared to anticipate as a frightening and mutilating experience, and since they seemed to be struggling desperately to find ways to deal with the emergency, the real offer of understanding and help became the keynote of the worker's security.

A picture of the "emotional climate" of the interview is in order here. It quickly became clear that the clinic examining rooms were not conducive to comfortable or fruitful interviews. For this reason, a deliberately leisurely walk to the social worker's office, the offer of a comfortable chair and a cigarette, and a quiet non-committal "opening of the door" to whatever each woman wished to express first, became the most favorable approach. Feeling genuine sympathy for what the patients were going through, and using psychiatric social work techniques and resources, the worker established a warm and friendly relationship as quickly as possible. The differing personalities and responses meant that each interview was dynamically different from every other and had to be so handled. At the end of the interview an exchange of names, telephone numbers, and addresses on paper, from hand to hand, was made, with permission given to call the worker at any time, as well as a reaffirmation of our satisfaction in being allowed to help. Finally, the patient was led, in the same manner, to the admissions office.

Twenty women, advised to have a hysterectomy for benign uterine disease were interviewed in the

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environmental situation described above; 10 immediately after they had been informed of the necessity of operation (called Group I, cases 1-10 alphabetically), ten from one to three weeks later (Group II, cases 11-20). These single interviews ran from 30 minutes to one and one half hours. At the start several women either were doubtful or, in their fear and panic, had categorically rejected the recommendation of operation. All ended by accepting the advice of the surgeon, as well as the offer of psychiatric support when indicated, although a few withdrew as will be apparent below.

Such a general acceptance raises questions:

1. Do these women, advised to have a certain operation, derive benefit from being provided a chance to discuss with trained personnel the meaning to them of the anticipated experience?

2. If this is true, does it not suggest that a general hospital should make available similar pre-operative interviews for patients awaiting surgery?

In an attempt to answer these questions, the carefully recorded interviews on these 20 women have been studied. For the purposes of this paper the following categories are used:

1. History and current life situation as spontaneously given.
2. First and main themes in interview and their inter-relationship.

3. Patients' reaction to "news" of a hysterectomy; physical expressions of anxiety.
4. Apparent implications of the operation; other concerns and fears verbalized.
5. Prognostication.
6. Verbalized response to offer of psychiatric support.

Findings

1. History and current life situation as spontaneously given

Since no physical or emotional history was taken, the reality situation as pictured by the patients tended to be sketchy, but as such it became a particularly useful clue in an evaluation of the patient's ability to handle the coming operation. The following examples illustrate this point.

Mrs. C. does not mention husband, children, home or in any way hint that she has an existence in a world of people. Frozen and a verbal, she can talk only of the operation as "cancer at last" and her terror of it. There is one brief and violent outburst of rage when she asks why the doctors hadn't told her she was going to have an operation—(this, 20 minutes after a full explanation).

Mrs. D. does not spontaneously comment on the operation at all, but plunges into an immediate phase of her life; the behavior of her ex-husband and the colored landlady who is evicting her. When

TABLE I
MAIN THEMES IN 10 WOMEN DIRECTLY AFTER THEY HAVE BEEN TOLD A HYSTERECTOMY WAS ADVISED

Group I			
NAME	AGE	COMPLAINTS, DIAGNOSIS	THEMES
Mrs. A.	26	Menorrhagia; Stein-Leventhal Syndrome.	1st: Bleeding. Main: <i>Must end bleeding</i> ; difficulties in childbearing.
Mrs. B.	41	None; Fibroids.	1st: Earlier mistaken diagnosis of fibroids when pregnant. Main: <i>Wrong diagnosis</i> . Conflict, old fears reawakened.
Mrs. C.	45	Pain in rt. groin; Ovarian Cysts.	1st: Previous operations. Main: <i>Cancerphobia</i> .
Mrs. D.	45	None; Fibroids.	1st: Make ex-husband pay hospital bills. Main: <i>Fury at Landlady</i> who was evicting her; hate of husband.
Mrs. E.	53	Urinary frequency; Adenomyosis.	1st: Escape from husband. Main: <i>Husband's sadism</i> . This is his fault. Will die from operation. Plea for peace.
Mrs. F.	44	Urinary frequency; Fibroids.	1st: In-laws and their large families. Main: <i>Loneliness and grief</i> ; mother's death; intense desire for more children; selfish in-laws.
Mrs. G.	60	None; Fibroids.	1st: News "startling." Never been in a hospital. Main: Fear of suffocation under anesthesia; self-reassurance.
Mrs. H.	50	Protrusion; Procidentia.	1st: Previous operations. Main: "Who would cut?" Must know at once.
Mrs. I.	42	Protrusion; Procidentia.	1st: "Knew this was coming." Description of condition. Main: <i>Horror of prolapse</i> . Urges operation.
Mrs. J.	44	Rectal bleeding; Fibroids.	1st: Past operations, illnesses. Main: Cancer, death, syphilis (from first husband). Hate of men.

TABLE II
MAIN THEMES IN 10 WOMEN ONE TO THREE WEEKS AFTER THEY HAVE BEEN TOLD A HYSTERECTOMY WAS ADVISED

Group II NAME	AGE	COMPLAINTS, DIAGNOSIS	THEMES
Miss K.	41	Distention; Fibroids.	1st: No money for operation. Main: <i>Wrongs done her</i> . All money put into litigation. Operation is wise.
Miss L.	45	Irregular menses; Functional bleeding.	1st: Bad menses started with illness of mother. Main: Physical symptoms. Relationships between mother, step-father and self.
Miss M.	48	None; Fibroids.	1st: Work, job; care of sick parents. Main: <i>Wanted children</i> : Own loss in not marrying; mother's illness, griefs and losses.
Miss N.	40	Menorrhagia; Fibroids.	1st: Must delay operation; no death insurance. Main: <i>Death fears</i> ; recent death of husband; problems with children.
Mrs. O.	47	None; Fibroids.	1st: Operation wise; cancer in family. Main: <i>Facing operation</i> ; feelings about mother who died of cancer; hatred of father.
Mrs. P.	47	Fatigue; Fibroids.	1st: Sister's death from cancer last week. Main: <i>Resisting hysterectomy</i> . Wants more children. Love of sister.
Mrs. Q.	43	Frequency; Cystocele; Anemia.	1st: Efficiency of own arrangements for hospitalization. Main: <i>Guilt and conflict</i> ; must have operation; would die with another child; afraid of nervous breakdown following operation. Sin against Church.
Mrs. R.	30	Meno-menorrhagia; Fibroids.	1st: "Awfulness of past three weeks" since heard of operation. Main: <i>Continual tears</i> ; a verbal; yearning for children; blind fears.
Mrs. S.	44	Menorrhagia; Functional bleeding.	1st: Headaches. Main: Headaches, and son who causes them.
Mrs. T.	51	Menorrhagia; Fibroids.	1st: Can't have operation. Mental illness in family. Main: Mental illness (in endless detail); must keep well.

the worker at last discusses the operation itself, she looks horrified as she grasps that this is going to be a hysterectomy—(this in spite of the fact that in the clinic she requested a low transverse cut so it would not show in her nightclub dancing.) She asks tensely if this means no more pleasure with men, and returns at once to her complaints of the landlady.

Mrs. F. tells of her unwillingness to have the operation; of her grief and loneliness. She loves children and wants a very large family like the rest of her in-laws. She describes an unhappy home situation where she lives under the thumb of her mother-in-law. She accepts the preferred help eagerly, saying she "needs a friend."

From Miss M. the worker hears a clearly presented outline of history and home situation, leading up to her regret of the necessity for, but her acceptance of, the operation. She has already done her crying, she says, over the fact that she will never have a home and lots of children. As she talks she sits quietly, hands resting in lap, capable looking and in good contact.

The latter two women, who attempted to orient

the worker to their situation, who "made sense," who described a reality under these circumstances, were likely to have a good grasp of the operation and its implications. Those who were obviously trying to deal with their fears realistically also proved to be most likely to handle the operation well. This does not necessarily mean that they were healthy emotionally. Miss K., though a disturbed individual, handled situations by mastery. Frightened of malignancy, she had already gone to the medical library and read all she could on the gynecological implications of cancer, and emerged quite satisfied in that respect. These women neither blocked nor repressed what the surgeon told them; they called on their own resources to help them face what was before them.

2. First and main themes in the interview and their inter-relationship.

The first theme or themes are the first meaningful remarks of the patient (exclusive of tentative comments about weather or such), whether while walking to the worker's office or when seated there. The main themes are those around which there is the

greatest emotion exhibited, and on which the most time was spent (see Tables I and II). They are the crux of what the patient found herself able to share with the worker as her confidence and trust grew. That they were of significance in the individual's response to the operative procedure itself was confirmed, in some cases, by later psychiatric findings.

The variety of themes is of interest. Only five realistically questioned or deplored the decision, made a plea for reversal of sentence, or showed grief. For the rest, the news seemed to trigger off other and deeper emotional concerns, as if, with the femininity of oneself being threatened, the whole life pattern came up in question. For a very few, it seemed to be a case of avoiding the subject of the operation at any cost.

A comparison of the first and the main themes shows direct and vital connection in both groups, as if anxiety had uncovered the key concern at once, while the free quality of these interviews allowed a further elaboration of this critical material.

It is not possible here to take up the fine differentiations between the two groups. Apparently the imagined or real dangers of a hysterectomy continued to be active in certain women, and those whose defences were not adequate for handling the situation at once, remained unable to deal with it and even showed increasing anxiety as the time for hospitalization drew near.

3. *Patients' Reaction to "news" of a Hysterectomy; Physical expression of anxiety.*

It has been possible to evaluate roughly the level of the patients' concern by their way of facing the coming operative procedure. We have already seen that only a few could express an open regret at losing the uterus, or could discuss the decision realistically. Emotions seemed to become redirected elsewhere. Anxiety was already present in all when they reached the worker's office. At her implicit invitation, many were verbalizing feelings for the first time so further tension was inevitable before they experienced the relief that follows the sharing process. The recordings contain many signs and symptoms of anxiety, vasomotor disturbances, muscular distortions and striking behavioral use of the body. Both quality and quantity of vocalization (a few a verbal as if frozen; many pouring out speech in a flood) served as further guideposts.

Some expressed gratification over the operation even as they showed deep conflict; others showed varying degrees of distress or fear; a few seemed to be avoiding the subject. The most striking were those who professed real ignorance of the operation to be done in spite of the care with which it had been explained. This suggests that those individuals were unable to accept the news until they had a chance to talk out their emotions in relation to it.

In this category the descriptive words "readied themselves," "very anxious," "extremely disturbed," etc., have been used following a study of the various manifestations of tension plus a subjective impression of the whole woman during the interview.

Most of the patients, whatever the age, talked spontaneously about childbearing, its problems, their wanting or not wanting children, as if discussion of a hysterectomy brought this subject at once to mind. Thus, it was possible to record conscious concern over losing the uterus in terms of its reproductive function per se, and this material is included in an appraisal of the patient's reaction to the news.

In Table III, the "main theme" is repeated briefly to facilitate understanding. The worker's "prognosis" (see findings in column 4) of the ability of each woman to deal with or master the operative procedure on an emotional level is also included here.

It may be noted that of the group who "understood and were extremely disturbed" (Table III,d), three later withdrew from operation for one reason or other.

Only four of the 20 were ready to verbalize their distress over the loss of ability to have more children, and of these, three were in their forties. Two of these understood but resisted having a hysterectomy; two blocked it as such. It would seem that the average age level (44.2 years) is a factor here in making conscious desire for childbearing of less importance than other feelings surrounding the loss of the uterus.

4. *Apparent implications of the operation; other concerns and fears verbalized.*

This category sheds further light on the meaning of hysterectomy to these women. The psychological implications of any hospitalization and surgery are familiar, particularly to medical social workers. In addition, a hysterectomy brings further potential dangers, which the patients themselves described through their verbalizations. That there were many "old wives' tales" made them none the less real to those that were involved. They are grouped for purpose of clarity.

a. Loss of childbearing "function."

Even for some who no longer wanted children, this could still hold implications. "Useless." "A woman's no good if she isn't able to bear children." "You never know when things drop out from under you. I might find myself wanting a child."

b. Loss of body integrity.

"Never be the same again." "Sickness the rest of my life." "Nothing but an empty shell." "People point at you if they know." "No one must ever find out." In addition to these reactions, various feelings and superstitions associated with the menopause

have been described, in spite of reassurance on a lay level that it is not the usual policy in our hospital to remove the ovaries in fibroid operations before the menopause.

c. Change in sexuality.

"No use to men from now on." "Will be terribly over-sexed and passionate." "Will have no feeling at all." "Will my husband leave me?" "Men know instinctively and go for younger girls." "Will I get all hairy like a man?"

d. Sense of a bad or diseased thing within the body.

"If it's no good any more, get rid of it." "When your right hand offendeth you, pluck it off." "I can't let anyone see me bleeding."

e. Other fears and concerns.

Cancer: the most frequently verbalized fear and present almost invariably in varying degrees of intensity. *Death* directly or indirectly expressed.

Mental breakdown; Loss of control; Blood and bleeding; Being cut; A mistake being made; Worry over surgeon and his reputation.

It has been of value, both diagnostically and prognostically, to note particularly those who expressed few or no fears, and those who expressed many and varied ones, as well as the meaning to each of the loss of the uterus. References to friends or relatives are of importance also. Practically all referred to someone who, following the operation—

1. Did "very badly," "went mental," "never was the same again," etc.

2. "Was better than she ever had been," "found the operation nothing!" Occasionally, a woman described both extremes as if trying to decide her own fate.

5. *Prognostication.*

This category represents the summary of the findings in all the variables, an overall evaluation of

TABLE III
CORRELATION OF MAIN THEME (TABLES I, II) AND PROGNOSIS

NAME	AGE	NO. OF CHILDREN	MAIN THEME OR CONCERN	PROGNOSIS	OPERATION
a. 4 understood what the surgeon said and verbalized a desire for the operation:					
Mrs. Q.	43	6	Guilt and conflict	Poor	Completed
Mrs. A.	26	3	Must end bleeding	Uncertain	Completed
Mrs. E.	53	2	Husband's sadism	Poor	Completed
Mrs. I.	42	3	Horror of prolapse	Uncertain	Completed
(All of these women expressed the desire for no more children)					
b. 3 understood what the surgeon said and readied themselves for the operation:					
Miss K.	41	0	Wrongs done her	Good	Completed
Miss M.	48	0	Wanted children	Good	Completed
Mrs. O.	47	0	Facing operation	Good	Completed
(One said she had never wanted children; two had previously faced the fact that they never would have children)					
c. 3 understood but regretted operation:					
Mrs. L.	45	0	Physical symptoms	Good	Completed
Mrs. F.	41	2	Loneliness & grief	Uncertain	Completed
Mrs. G.	60	0	Fear of suffocation	Good	Completed
(Two still wanted children; one one had faced fact of no children)					
d. 4 understood and were extremely disturbed:					
Mrs. H.	50	0	Who would "cut"?	Bad	Withdrew*
Mrs. T.	51	0	Mental illness	Bad	Withdrew*
Mrs. B.	41	2	Wrong diagnosis	Bad	Withdrew*
Mrs. J.	44	2	Cancer, death, syphilis	Bad	Delayed
(Two childless women were unconcerned about children; two verbalized desire for no more. All were deeply absorbed with other fears.)					
e. 2 blocked the fact of hysterectomy but accepted an operation:					
Mrs. D.	45	0	Fury at landlady	Uncertain	Completed
Mrs. P.	40	1	Resisting hysterectomy	Uncertain	Completed
(One wanted no children; one wanted more intensely)					
f. 3 blocked the hysterectomy and were very anxious:					
Mrs. N.	46	3	Death fears	Poor	Completed
Mrs. S.	46	3	Headaches	Poor	Completed
Miss R.	30	0	Continual tears	Bad	Withdrew*
(Two wanted no more children; one wanted them intensely)					
g. 1 blocked even an operation and was extremely disturbed:					
Mrs. C.	45	5	Cancerphobia	Bad	Completed
(She wanted no more children)					

*For one reason or another these women reversed their earlier decision to go through the operation as planned.

each woman and her responses. Presuming that an individual uses her whole self in dealing with an emergency, that she has certain resources or defenses to call on, and that there is always an inner consistency, then her ways of handling the current situation probably reflect some of her past and possibly her future patterns of behavior.

Mrs. G. (theme: *fear of suffocation*), though shaking visibly and licking dry lips, smiles warmly as she says that she feels she will come through alright; she is a good Yankee.

Mrs. O. (theme: *facing operation*), arrives prepared to cry, although she doesn't know what for; does so, gets relief and then is amused at herself and her fears.

Mrs. Q. (theme: *guilt and conflict*), "writhes" through the interview; sees destruction for herself if she doesn't have the operation, sees a breakdown if she does, and begs for a psychiatrist at once.

Mrs. J. (theme: *cancer, death, syphilis*), seems superficially relaxed. Spends the first 10 minutes of interview examining fingernails casually, commenting that she expected an operation and it doesn't bother her. Under extra tenderness, her guards break. She pours out a story of anguish and bitterness, of having the "horrors," of floor pacing; nightly ineffectual drugs; every arrangement long since made for death. This was cancer, expected ever since her husband infected her with syphilis.

Mrs. H. (theme: *who would cut?*). Averbial, suspicious, unmoving, hard to reach. She is concerned only with "who will cut?" Her voice rises higher and higher with increasing demands to know. A single reference to her only child killed in the war seems to increase her panic, and she asked to see a psychiatrist at once.

It should be clear that this interview situation was not one where objective appraisal was possible. The worker's whole "perception" of the individual had to enter into any evaluation as to whether her currently active defenses seemed based on personality strengths or on undesirable ways of dealing with crises. The way the patient met a look squarely, the firm way in which she held her body, the tightening of muscles as if in determination, the little nod of self-reassurance, helped confirm one's impression of her ability to deal well with the situation. An inevitable subjective judgment was, therefore, made and recorded at the time and reconfirmed in studying the interviews.

The patients' attempts to cope with the situation have been arbitrarily divided into four categories: (See Table III.)

1. Prognosis: *good*
2. Prognosis: *uncertain*
3. Prognosis: *poor*
4. Prognosis: *bad*

This material is summarized by saying that five women seemed to be handling the situation fairly successfully; five possibly successful; four doubtful; six appeared to failing, and of these, four never came in for the operation. It is of interest that these rough ratings correlated quite closely with a later evaluation of the post-operative course of the 16 patients who were operated on. This would suggest that those whose personality strengths were inadequate to enable them to handle the first impact of news were not likely to be much better equipped to handle the operation itself, and that the prognostic value of such interviews as these might be used to advantage.

6. *Verbalized response to offer of psychiatric support:*

When, at some point in the interview that depended on an instinctive decision that the patient was ready for it, the worker presented the possibility of psychiatric aid, each woman, almost as if given a shove, moved more freely into a description of what she was feeling or fearing. It is hard to tell what part the symbolism of the word "psychiatrist" played in opening the flood gates. In any case, most had to discuss their concern with psychiatry. Many clinic patients reacted with the response that psychiatry meant being "really crazy." "I didn't think I was that bad." "Why would I need one?" "My priest would never allow it." Often, after these first reactions, the worker drew a brief picture of preventive psychiatry and gave the women a chance to talk out their feelings.

In view of what we have seen in relation to defenses, where only five of the 20 women seemed to be handling their anxiety well, it can now be understood what the interview and the offer of psychiatric support might have meant to them. The following are some of the responses on acceptance. "The way it makes me feel sitting here, it must be a wonderful thing." "Of course. It should be routine." "It's the best thing I ever heard of. People should think of all these things that frighten you." (With a sigh), "It sounds so good." "Don't really need it, but it sounds interesting." "I feel so much better just talking." "You don't know when things might drop out from under you." "Need a friend." "It might cure my headaches." "You've helped me so, can't I go on seeing you?"

Discussion

In a single unstructured interview each of 20 patients, unprepared for what she would find in a social work interview or in herself, was given the chance to bring out concerns and fears that were very real to her. The drive to express these, and the accompanying anxiety, varied according to each woman's emotional involvement and the strength of her personality defenses.

These 20 clinic patients varied widely in education, social background, race and religion. A few had been to College; most had no more than a high school training. Fifteen were white and five colored. They showed also a considerable variation in duration and severity of symptoms and extent of pathology. The interviewer purposely did not review the medical history and physical findings. She was assured by the referring physician only that the tentative diagnosis was that of benign uterine disease—in a majority of cases involving the presence of fibroids (See Tables I and II.). It was felt easier to deal more objectively with each woman's anxieties without a fore-knowledge of her medical statues.

Just as every woman differed, so the process of each interview differed basically from every other. The constants were the type of operation advised and the way it was presented, the worker, the emotional climate within the office, and the help offered. Most of the techniques used were routine, although some of the intangibles of casework (such as non-verbal communication between patient and worker) may have played a part in helping these women trust the worker sufficiently to speak freely with her.

The range of response ran from a denial or blocking even of the knowledge of the planned operation to a "sensible" acceptance of the news; from confused thinking to obvious mastery of the situation; from blind fears and superstitions to controlled reality questioning and evaluation. All responses were used prognostically in estimating each woman's readiness for operation and her ability to deal with it in an emotionally healthy manner. It is not often practical to set up a psychiatric team to study the problems of every patient facing major surgery. Single interviews, however, may sometimes indicate those too disturbed to complete the operative procedure without profound emotional reactions. In such cases, proper psychiatric measures can then be instituted.

The interview itself apparently gave all the women a sense of support and relief, and we felt that the readiness of some to accept psychiatric aid stemmed from satisfactions arising out of the interview and a willingness to continue in a supportive relationship.

Although these were clinic patients we believe that similar reactions, with different coloring, are probably aroused to a certain extent in private patients faced with the same news. The doctor-to-patient relationship in private practice no doubt tends to mitigate somewhat the concern that was met with in the clinic. Yet there are limitations as well as strengths in the private practice relationship. Much can be accomplished by the conscientious and sensitive surgeon who can, and often does spend a great deal of time in a reassuring explanation of the

details of the coming operation. His role, however, must remain essentially that of an authoritative and proficient technical expert. His aim must be to build confidence in his integrity and ability, his kindness and selfless interest. An attempt to deal with the multiform aspects of anguish encountered in these interviews, is not always in the structure of his professional role and may even threaten the unique relationship between the surgeon and his patient. It may be that contact with a trustworthy maternal figure (social worker) was a factor here, since most women, while willing to give physical details of gynecological complaints to a man, tend to reserve the deeper meaning of such complaints for outlet in a certain kind of communion with other women.

We believe that these women profited from the opportunity to verbalize their feelings about the anticipated operation. This suggests that a general hospital might consider making available some similar pre-operative interview opportunity for patients anticipating major surgery. It has not been part of our research interest to consider whether this single session has made any difference in a patient's post-operative course, but the findings of these interviews suggest that it is, in any case, a humane thing to provide. The relief so clearly verbalized by the patients after the sharing of anxieties, ridding themselves of misconceptions and getting the needed concrete information (unassimilated in the examining room), would indicate that the contact alone, with its grant of freedom to talk, has had important meaning for them. Presumably any hospitalization for surgery would have its own patterns of meaning for any given individual, including the psychosomatic implications of each particular illness. A few patients sail through operations with smooth mastery. It is the average patient who needs reassurance and a chance to balance her fears against reality, and the seriously disturbed patients who vitally need support for anxieties only indirectly related to the operation itself. A consideration of such needs should be incorporated in any goal of comprehensive medical care.

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Opinion Survey And Relative Value Study

The following five presentations were made at the semi-annual meeting of the New Haven County Medical Association at Meriden on October 22, 1959. Many of our members believe the Society is moving in the right direction with respect to the socio-economic problems currently facing the medical profession; some do not. Perhaps these several points of view will prove helpful in formulating satisfactory individual conclusions.

W. R. R.

Should Connecticut Physicians Lead Or Follow In The Health Insurance Movement?

MAX CAPLAN, M.D., Meriden

Chairman, Third Party Payments Committee
New Haven County Medical Association

THE fundamental ideas behind third party agencies are not new. Fraternal organizations were among the first to attempt to help their members with medical bills, and there are many credit unions, mutual benefit associations, trade union groups, industrial groups such as railroads, mining companies, lumbering companies, etc. which date back to the nineteenth century. While they differ in some ways from our newer plans, they have as their main objective an attempt on the part of the working man to prepay for some of the medical and surgical emergencies and to limit his payments by using actuarial standards. In general the principles are similar whether the bills are paid by the worker, the management, the union, the government, or the fraternal organization, or by contributions from all of them.

Voluntary types of third party agencies such as Blue Cross, Blue Shield, and private insurance companies take care of the vast majority of the insured. As a matter of fact, today, 71 Blue Shield plans take care of 43 million people. The Federal Government is involved through its Veterans Administration program and Medicare; the State is involved with unemployment compensation, Aid to Dependent Children and other welfare programs. And then there are numerous closed panel hospitals, clinics, union groups, etc.

The functions of the third party agency: To help patients pay the costs of good medical care out of their income; to help them pay their doctors, hospital bills, laboratory and X-ray bills and pay them on time; to encourage physicians to give good medical care since they would be assured of adequate recompense for their services.

Naturally, there are good and bad effects of these third party agencies on medical practice. It is good for the patients to know that they are protected—yet some of them feel that this protection should be a function of the government and that it should not be paid for by them, as individuals. They fail to realize, however, that *they* are the government and, therefore, must pay for all services either voluntarily or through increased taxation. Some also suspect that because they are insured, the costs of their medical care will be higher. Often, those who are young and healthy feel that they are paying premiums for many years without getting anything in return but that, of course, is the real idea behind all insurance plans. Potential benefits of these plans to the physician can be readily seen, since it is possible for him to have assurance of being paid adequately and promptly, his load of “free” patients should be materially reduced and he is helping to see that those patients maintain their solvency and self-respect. One potential undesirable effect is that too many patients may not pay a full and customary fee because of the extension of “service benefits” to higher and higher income brackets, which some agencies are proposing.

Voluntary third party agencies are here to stay—about 100,000,000 of us are using them in some form at the present time, and the number is increasing every year. They are helping many patients to get the best of care and the highest type of medical service in good accommodations, all at reasonable cost. The premiums for these plans can be budgeted, even through weekly payments if desired. The programs are constantly trying to improve their coverage and benefits, and they can and should be valuable aids to the private practice of medicine. In

contrast, the closed panel hospitals and clinics—which do not allow the patients free choice of physician—pose a very real threat to private practice as do certain proposed governmental health care schemes. That is why I believe the doctors of Connecticut should assume definite leadership in the health insurance movement. We must devise, revise and outline as many of the provisions in these plans as we can for, once put into effect, it takes a long time to change them. For example, very few of us are satisfied with Medicare.

A new medical specialty is rapidly becoming of age—that of medical insurance advisement. Already we have many physicians in our State who are expert in this field, and more are becoming interested all the time. We must take an active part in the development of all these plans and must be constantly on the alert to improve them, always considering the best interests of the patient first. Once the plans have been put into operation we should all support them, lending the dignity and wisdom of the medical profession to their furtherance.

ISRAEL E. BLODINGER, M.D., *New Haven*

Councilor, New Haven County Medical Association
Member of the CMS Board of Directors

It is my belief that to a great extent the future freedom of the practice of medicine depends on our answer to this question. In the few minutes allowed me I shall briefly give my reasons for this viewpoint.

To be logical, it is first necessary to demonstrate the necessity for the development of the voluntary health insurance movement. In the word VOLUNTARY you have the answer. Various forces in this country, beginning with the early New Deal days, have been working toward the goal of COMPULSORY National Health Insurance for the entire population. The first climax to this activity was the introduction of the Murray-Wagner-Dingell Bill, as sponsored by President Truman in 1945. In response to this threat, and also partly in answer to the economic conditions of the depression, leaders in the medical profession together with public spirited laymen came up with what is now known as the Blue Cross and Blue Shield movements. Thus a voluntary form of insurance was to be the answer to the compulsory provisions of a Federal program.

Here in Connecticut our State Society first recognized the problem in May of 1939 when a committee of five members was appointed to inquire into the subject of prepaid medical service. In 1939 largely through the efforts of the Connecticut State Medical Society an enabling act was adopted by the Connecticut General Assembly making legally possible a non-profit medical insurance plan. From this point on our medical leaders stopped leading

and for 10 years continued a running debate with no positive action. The defeat in 1946 of the Murray-Wagner-Dingell Bill for compulsory national health insurance was probably a factor in this long delay.

In December 1947 a group of laymen directors of Connecticut Hospital Service obtained a charter to set up Connecticut Medical Service for the purpose of establishing a non-profit surgical-medical service plan. This precipitated immediate action by our State Society. A special meeting of the House of Delegates was held in Hartford on January 28, 1948. This meeting instructed the then existing committee to bring in a report to the House at its annual meeting on April 28th. On this date the House of Delegates passed a motion to "approve a prepaid medical service plan . . . , including service and indemnity features . . . with an income level. . . . This plan shall be written by a non-profit organization. . . . A majority of the directors of the organization must be physicians. . . ."

Finally, on December 9, 1948, at a meeting of the House of Delegates, a plan was accepted which led to setting up C.M.S. as we now know it. There was, however, one important difference from the action of the April 1948 House of Delegates. The Board of Directors of the corporation was to consist equally of six physicians and six laymen.

The point I wish to make in reciting all this history is that our Connecticut physicians did not always lead, but rather on occasion, followed the actions taken by groups outside organized medicine.

What are the threats which today assail free medicine? The social reformers, the do-gooders, the labor leaders and vote-seeking politicians have learned that the frontal assault, as exemplified by the defeated Murray-Wagner-Dingell Bill, is ineffectual. The newer technic is to whittle off small pieces from the body of our economic freedom until not even a skeleton shall remain. Note the expansion of the Veterans' Administration, the Medicare Program and now the very real threat of the Forand legislation. Observe also, the widespread development of the closed panel type of medical practice sponsored and controlled by various lay groups throughout the country. We would be blindly trying to escape from reality if we could not see these as bold attempts to eventually completely destroy free medicine as we now enjoy it.

What shall be our answer to these very real threats? Shall we deny their existence and thereby feel safe? Shall we merely resist and offer nothing constructive to a society which is demanding the best possible medical care for all its members at a price they can afford to pay? If we take this course we will surely be completely overwhelmed in the

not too distant future by more and more lay dominated closed panel groups, ever greater encroachment by the Federal government, and finally a complete Compulsory National Health Insurance Scheme. This is the blue print as envisioned from hearing and reading the oft-repeated words of many labor leaders, social reformers and vote seeking politicians.

What then, shall be our course? Today's economy is largely based on credit and the public, which seeks and deserves the best possible medical care, wishes to pay for it as they do for many other commodities, by credit. The logical answer, then, would seem to be voluntary pre-paid insurance plans. But just any insurance plan is not enough. It is at this point that leadership by the medical profession is demanded. The leaders must be many and not just a few. They must be willing to educate those in the profession who, because of apathy and indifference, or lack of time, have not become sufficiently aware of the dangers which beset us. These leaders must have broad enough vision to attempt to constructively anticipate the health needs of the public in such a manner as to effectively forestall the do-gooders and social reformers who are attempting to meet these needs by governmental means.

The answer then, as I see it, is the voluntary Health Insurance Movement under the leadership of organized medicine, together with the co-operation of those segments of the public who are interested in preserving, for this country, a strong, free medical profession which can best serve the health needs of every member of society, irrespective of economic status. If we accept this challenge I am confident that we shall be worthy of the freedom we will surely retain.

KENNETH F. BRANDON, M.D.
Connecticut State Chairman
Health Insurance Council

Leadership infers the ability to beget cooperation. The cooperation of hospital, medical and insurance groups is pertinent to meet the demands upon all of us.

The public has little criticism today regarding the quantity or quality of medical care. The criticism is the cost. Even though physicians fees make up only 23.8 per cent of the bill for medical care, they are being held responsible by the public for the costs. The public is under the impression that physicians determine the type and extent of hospitalization and clinical investigation and treatment. I don't see how we can escape this responsibility.

It may be well to review the reasons for the tremendous growth in health insurance in recent times.

The growth has been greatest in group health insurance where the employer shares in the cost or pays it all for his employees and their dependents.

In 1932 the first hospitalization insurance program was that of the Blue Cross, approved by the American Hospital Association. In 1934 the commercial insurance companies followed with varied hospital plans. They moved into the field of surgical insurance in 1936, when it seemed a natural outgrowth of hospitalization coverage.

In World War II, our economic controls included a freeze of wages and prices. Labor's demands for increases were limited to "fringe benefits," and they are still major bargaining goals. More and more health benefits were offered. Initially, labor's demands had been associated with disability caused by occupation. Soon there was limited coverage for non-occupational conditions. Now the common pattern is for comprehensive non-occupational medical care and hospitalization. Some companies provide disability payments during illness in addition to medical and hospital costs.

Insurance companies and industry have had a long experience in workmen's compensation costs. Thus, fairly accurate predictions can be made regarding losses. Therefore, it is possible to establish uniform premiums. The premium rates for compensation insurance are regulated by the insurance departments of each state. Each industry is classified according to the frequency and severity rates of the various risks involved. These rates are, however, subject to revision, upward or downward, depending on individual plant experience. Thus, each business pays for its own industrial injuries and occupational disease in direct ratio to the actual cost. This situation has been a great impetus for the improvement of industrial medical and safety programs.

Non-occupational health insurance has not evolved to the stage when such neat underwriting formulas can be applied. However, the insurance industry is trying to price its product by observing the many variables and changing conditions in medical care. Factors used in determining the risk potential include the number of employees to be covered, geographical location, medical and hospital facilities available, average income, and age and sex distribution of the group. Costs are also influenced by how much care and what kinds of care are given, as well as the changes made in providing such care. These are not easily measured, and the companies here require your cooperation.

Approximately 85 per cent of group health contracts written today are on an experience rating plan—in other words, on a cost-plus basis. At the end of the policy year, all claim payments are totaled and an amount is added to provide for the

carrier's administrative expense. The sum of these two items, plus a small contribution to surplus, establishes the annual premium for any particular year.

This arrangement causes the employer and his union to scrutinize these costs. They are becoming increasingly well informed on the cost of each item in the bill for medical care. For example, they are aware that hospital costs are increasing at the rate of five per cent annually. Such increased costs are passed on to the ultimate purchaser. If he finds these costs unbearable, coverages are cut. This leads to employee grumbling and demands for succor from the government.

The latest and bravest item in the health insurance field is comprehensive medical care and hospitalization insurance and major medical insurance. More than 17,000,000 persons are now covered.

This new type of coverage has no set pattern. Variations are tailored to the purchaser's desires. However, such policies contain five distinct features.

1. They carry a maximum limit on benefits, usually \$2,500 to \$10,000.
2. They carry a deductible provision, ranging from \$25 to \$500.
3. They carry, a co-insurance clause, usually 20 per cent to 25 per cent.
4. They cover a broad range of expense in or out of the hospital and are not limited to just hospital or surgical expenses.
5. They carry no maximum fee schedules, but state that service must be necessary and fees reasonable for the type of service provided and the geographic area concerned.

The medical profession can assert its leadership to make voluntary pre-payment plans such as this survive by:

- a. Removing the mystery of medical costs from the public's mind by candid revelations of the basis on which fees are determined.
- b. Educating the public on the costs of medical care and especially of hospitalization.
- c. Reducing hospitalization. It has been said that in Massachusetts Blue-Cross Blue-Shield subscribers could save eight to 10 million dollars if the average stay per patient were reduced by only one day and if one out of 50 patients were treated at home instead of hospitals.
- d. Using nursing and convalescent homes for patients whose chief need is custodial care.
- e. Using outpatient and office services in lieu of hospitalization whenever possible.
- f. Sustained pressure to reduce overuse and abuse of health insurance coverages.

BENJAMIN D. THAW, M.D., *Hartford*

Chairman, Committee on Relative Value Study
Connecticut State Medical Society

The Committee on Medical Practices of the American Medical Association says "Relative Values are numerical unit designations which express the relationship one professional service bears to another. These values are, in effect, reflections of the time and effort expended to perform these services as well as of the experience and competence of physicians who provide these services."

A comprehensive list of procedures performed by all members of the medical profession, each such procedure or treatment bearing a relative value, is referred to as a Relative Value Schedule. All too frequently the confusion exists between a Relative Value Schedule and a Fee Schedule. It should be emphasized that a Relative Value Schedule is definitely not a Fee Schedule. The confusion, perhaps, arises because Relative Values *are derived* from the customary charges physicians in a community or area may make for their professional services. However, the Values themselves are not fees and Relative Values indicate relationships only. For example; a simple procedure such as an office visit might have a designated unit value of one, referred to as the basic unit. Any more complicated procedures or treatments such as, for instance, a complete history and physical examination, including office urinalysis and blood count, etc., might be worth a multiple of the routine office visit, thus having a Relative Value of, say, three or four. This means that this complete examination, in relation to a simple office visit, is considered to involve three or four times as much in terms of time, skill and knowledge and thus would have an assigned unit value of three or four.

WHY DO WE NEED A RELATIVE VALUE SCHEDULE?

Our social economic evolution has brought pressures to bear among all segments of present day civilization. Not the least of these pressures have been felt by the medical profession in recent years. The government, organized labor, various political factions and agencies have brought the medical profession into the spotlight of criticism, especially with respect to its methods and principles of determining the remuneration for the services it renders.

As an outgrowth of such criticism, certain initial steps have been taken by the medical profession to protect itself against the evils of socialized medicine. The result has been the gradual development of voluntary health insurance programs to satisfy the medical care needs of a large segment of the population. This naturally leads to greater demand for prepaid medical programs for larger and more spe-

cialized segments throughout the country. Organized labor has sought to adopt some of these existing insurance programs or to modify them to their own needs and, where not feasible, have set up their own programs. It is also well known that in certain parts of the country, this has been accomplished at the expense of free choice of physician by the patient. A corollary to this, logically enough, has been that third party payment agencies have become more and more influential in their ability to determine the payments deserved by a physician for his services. Gross inequities have thereby become evident between third party payments for services and their actual worth.

Another inequity, which has become increasingly apparent in present day insurance programs, is the disproportionate coverage of one service versus that of another. Thus one procedure may be considered to be adequately or reasonably well covered, whereas another procedure may be greatly undervalued or not even included in the plan.

These obvious inequities and discrepancies in present day programs, make the study of relative values and the development of a Relative Value Schedule appear worthwhile as both a public and a professional service.

HOW DO WE ARRIVE AT A RELATIVE VALUE SCHEDULE?

A great deal of the basic work in this field was done in the State of California. The initial studies in California started in 1952. An attempt was made to bring order out of several varieties of chaos. Neither was there any relationship between various county society fee studies nor any uniform nomenclature for various procedures covered. Further, the private insurance company fee schedules expressed no rational relationship between services. Thus a Committee was set up to study these problems on a statewide basis and after several years of work, a Relative Value Schedule was developed which incorporated (1) proper coding for each procedure, (2) a complete listing of all procedures known to date, (3) assignment of a value to each one of these procedures.

WHAT HAS BEEN DONE ABOUT RELATIVE VALUES IN THE STATE OF CONNECTICUT?

In Connecticut, the study of relative values was authorized in December, 1958. Our Committee was organized and got under way in its work in April of this year. The basic California study has served as a guide and the Committee has attempted to follow the general outline as suggested by the Committee on Medical Practices of the American Medical Association, under the chairmanship of Dr. Bibler. Your State Committee on Relative Values has had monthly meetings since April and is still working

primarily on the first two requirements of a Relative Value Study; an exhaustive, comprehensive list of procedures of all medical services and the assignment of proper coding, preparatory to a questionnaire which will be sent out to all State Society members sometime after the first of the coming year.

In this questionnaire the physicians will be asked to answer only those questions which refer to the procedures that he normally performs. He will be asked the number of times that he usually performs such procedures over a given period of time and to list his usual charges for each procedure. This information will then be tabulated and analyzed with actuarial and statistical consultants and relations will be set up between the worth of one procedure versus that of another. This will then satisfy point number three of the study, namely; the assignment of unit values to listed procedures.

You may well consider that inequities will exist between one region within our State versus another, as concerns usual fees charged. This has been found to be true in other states where such studies have been conducted, but generally the relation of the unit value of one procedure as compared to another has remained the same.

HOW IS A RELATIVE VALUE SCALE USED?

In the states where these schedules have been adopted they have served as a guide to insurance carriers, prepayment plans, state welfare organizations, etc. and have been adopted by local medical societies in California to settle disputes over grievances. The uses of a Relative Value Schedule are many, not the least of which is to derive from it a Fee Schedule, in which case a dollar value is assigned to the basic unit and the dollar value of any other procedure can then be arrived at by multiplying the unit value times the dollar value.

It has been pointed out by some that this may lead to a certain standardization of charges for services rendered and that this may be true is borne out by the fact that, in California, a patient may call on certain medical societies and inquire what the prevailing medical charges are for a certain procedure in that area.

It is our hope that in Connecticut, the Relative Value Schedule will fulfill the hopes that it has in California—"that it will make good adequate medical coverage, which allows free choice of physicians, easier to produce, buy, sell, and administer; that it will establish the exclusive right and the exclusive duty of medicine to set and interpret its fees and the methods by which physicians will be paid; and that it will help adequately to protect the insured patient and to fairly compensate the physician."

WILLIAM R. RICHARDS, M.D.

Chairman, Sub-committee on Opinion Survey
Connecticut State Medical Society

In these hectic days of rapidly changing social, economic and political climates, doctors are sometimes at a loss to decide toward which of these important areas they should direct their attention first—if, indeed, they are aware of the changes which are occurring or are conscious of the fact that their attention to these matters is urgently needed. Yet, all across the land, social welfare groups are hard at work planning the downfall of the entire free enterprise system and, in particular, the destruction of freedom in the profession of medicine.

In the depression years of the late twenties and the thirties, the social planners really came into their own and have since won several important but, to them, relatively minor victories in their campaign to create a total welfare state in America. All of us are aware of the fact that today, some aspects of our society and of our form of government are socialistic and we have grown to accept them—albeit grudgingly and with a certain amount of distaste.

But to the dedicated advocates of the welfare state, these represent but small stepping stones on which to stand as they reach toward their first major plateau of *real* progress—governmental control of the medical care industry or Socialized medicine, as it is commonly called. If this primary goal is achieved, bureaucratic controls will be imposed upon many people—not only on doctors of medicine but also on our colleagues in dentistry and on those engaged in providing the so-called paramedical services; nurses, pharmacists, technicians and hospital personnel. We will all be victims of the regulations, restrictions, red tape and waste which are so often characteristic of ventures of the federal government into business or professional fields. Worst of all, perhaps, these controls will prevent us from rendering to our patients the quality and quantity of medical care to which they have become accustomed under a free system.

As responsible citizens, we must use our influence to forestall such legislative action in the Congress and we must continue to exert our influence until the battle is won—or until it is hopelessly lost.

Meanwhile, whether we wish to be charged with the task or not, both our friends and our opponents are urging us to produce workable alternatives—plans which will provide the people of America with good medical care at a price they can afford to pay, without intervention by government. The alternatives which have been officially endorsed and sponsored by organized medicine are the prepayment or health insurance programs which have

become known as “the voluntary plans,” in contrast to compulsory ones such as might be operated under federal auspices. I have just said that organized medicine has voiced official approval of the voluntary methods of providing prepaid medical care. But it is increasingly apparent that there are a fair number of physicians who—as individuals—do not subscribe to the health insurance principle at all. These men will neither support, nor participate in, any of the voluntary programs. They will not tolerate the intrusion of a “third party” agency into the traditional patient-physician relationship. They are so thoroughly indoctrinated in the concept of a free and individualistic society—so firmly convinced that the economics of medical care are of only secondary interest—that they would rather sink under the waves of Socialism with banners flying than give up one iota of what they consider to be their inalienable rights. These men may well be admired for their idealism but certainly not for their realism.

At the opposite end of the philosophical scale, there are groups of physicians who have found that there are certain monetary advantages to these plans. The promptness of payment for services rendered, for example, is most appealing to them and offers them a degree of financial security which they have not found to be possible when they bill their patients directly. Their satisfaction or dissatisfaction with prepayment and insurance plans is in direct proportion to the number of dollars they receive for each claim and the regularity with which they receive their checks in payment. These doctors are definitely *not* idealists but they do demonstrate a type of realism which, unfortunately, weakens the cause of medical freedom rather than strengthens it. The loud voice of money is often heard in America today, but it must not be the voice of medicine.

These two different groups represent extremes in their attitudes toward prepayment plans, yet they have one characteristic in common. Neither has the slightest interest in, or knowledge of, who determines the medical policies or practices of these plans; what voice the medical profession has in their operation; whether they are designed to promote public interest at the expense of professional interest or vice versa; or if they could be improved and expanded to the mutual satisfaction of the patient and the physician of his choice. They are both content to leave these things to chance, the first group because they reject the plans entirely and the second because, whatever is good or bad about the programs, they like those prompt and regular payments coming in.

Between these extremes, we find the majority of physicians—men who are aware of the many problems confronting the medical profession; men who hope it is still not too late to preserve private prac-

tice and who, if they cannot have the whole pie, would rather have a good big slice of it than none at all. These men constitute the hard core of support for the claims of their medical organizations that the success of the voluntary health movement can, at least in part, refute the argument of the socializers that governmental controls are necessary. These doctors are prepared to sacrifice a little of their individual freedom in order to preserve the collective freedom of the profession. But they are not prepared to do this passively and in ignorance nor are they willing to delegate the responsibility for determining their medical futures to people who think mostly with adding machines and calculate surgical risks via the mechanical brain.

There is, of course, a proper place within the management of the health insurance industry for the statistician and the actuarialist. There are also very important functions which can be best served by representatives of the laity—of the public, as we say—if the business policies of the plans are to be sound.

But there are certain vital decisions which can only be made by spokesmen for the profession, if the medical policies and practices of these programs are to be workable, equitable and consistent. The “doctors’ plans,” as they are called, are not in any sense operated exclusively for the benefit of doctors, yet if the public is to get what it pays for, no plan should unknowingly offer to sell services which it does not own, under terms which make it economically impossible for physicians to provide them to the policy holders.

The intent of the House of Delegates, in voting to have the Society conduct an Opinion Survey, was that the elected and appointed representatives of the medical profession in this important field should know how practicing physicians in Connecticut feel about various aspects of prepayment and health insurance programs; that these representatives should at all times reflect the considered opinions of the majority of our doctors rather than those of some influential minority or small group of individuals; and that, through this democratic mechanism, the insuring agent, the public and the practitioner would all share in the benefits provided by sound professional guidance in the determination of the medical policies of voluntary programs which offer to subscribers the opportunity to prepay for their physicians’ services.

These, then, are the considerations, the problems and the methods to which your Council and your House of Delegates have been directing their attention in recent months. This is why they believe an opinion survey should be conducted—and a Relative Value Study as well—and have so recommended to you, the members of the Society.

Will you cooperate in these ventures? Will you attempt to become better informed in these matters? Will you make your individual voices heard through these mechanisms? Or will you remain resigned and apathetic—unconcerned and uninformed—and let reasonable freedom in the private practice of medicine be lost by default, thereby doing an everlasting disservice to your patients and to yourselves?

These are the questions which only you can answer. The decision is yours.

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BARNETT GREENHOUSE, M.D.
New Haven

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The indications for chlorpropamide are the same as for Orinase. In dosages beyond the therapeutic range chlorpropamide is more effective than Orinase and a truer measure of insular reserve. In instances where Orinase activity declined chlorpropamide reactivated control.

The development of a refractory tolerance to the drug (“secondary failure”) experienced on prolonged use of Orinase is becoming evident also with chlorpropamide. Stopping and starting the drug at intervals is aimed at preventing drug resistance.

Chlorpropamide exhibits a rapid hypoglycemic response, devoid of marked blood sugar fluctuations and wide metabolic excursions and obviates the need for a priming dose. Absence of acetonuria in the chlorpropamide responsive patients reflects a favorable effect on carbohydrate metabolism with a stabilizing influence on the diabetic metabolism.

There were four instances of allergic skin reactions. Otherwise, excluding toxic drug reactions inherent in overdosage, no persistent toxicity was encountered at therapeutic levels in this pilot study.



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SEARLE

THE PRESIDENT'S PAGE

If one reads the daily press he will observe dispatches from Washington which imply, either obliquely or directly, that a major effort will be launched for the expansion of Social Security benefits far beyond present limitations when the Congress reconvenes in January.

To the concept of only cash benefits under OASDI there will be added a new face, a *service* benefit, as proposed in Forand-type bills which were introduced in both the House and Senate in the last session of the Congress. By this time every physician in this state and nation should possess at least a working knowledge of the kind of legislation typified by the Forand Bill, H.R. 4700.

The great "liberalizers" working on this program are reported in the press as planning to make sizable changes in the Social Security Act to extend not only the regular cash benefits to the tune of a rise of 13 per cent, but also to include the limited hospital and surgical care services proposed by the Forand Bill. It is intriguing to me to note that so much emphasis is being placed on the latter aspects of these bills, when in reality, the predominant type of medical care the elderly need must be supplied by the good old family physician and the internist, whose services are not included under the Forand Bill at all.

Irrespective of what these alleged improvements are designed to accomplish, there is one thing of which we *can* be certain; that the *costs* of a federal program for the care of the aged and aging will expand beyond all comprehension. The costs of any plan with a built-in mechanism for expansion *cannot* be limited, and yet most physicians know that despite continuing expansion, wherever a government attempts to render medical care, such care always deteriorates.

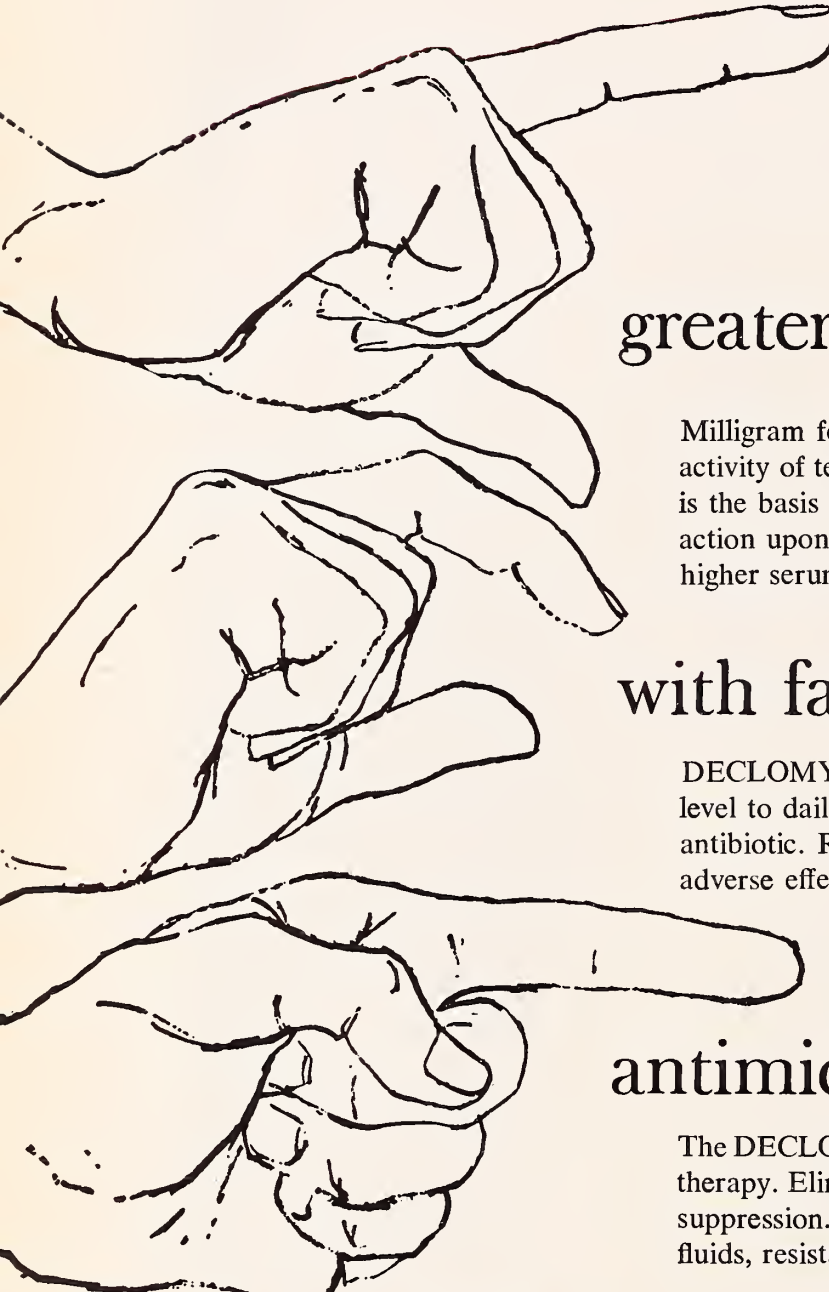
Through a stroke of political genius, the welfare-statists have suddenly uncovered a great distress and a universal need among the aged for the type of medical care provided in these bills, although statistically this type of care has long been known to apply to but a fraction of a relative pathologic few. Why must virtually every productive worker in the nation assume the additional burden of taxation required to operate this emotional, vote-getting scheme? Even the wildest sociological dreamer admits that we shall be headed for higher taxes for both the participants in the system and their employers. This increase will likewise be reflected upon the entire tax structure and will add to the cost of every purchase we make. These plans will force us to take one more giant step toward the welfare state and ultimately lead to liquidation of the free enterprise system. Political talk is cheap—facts are difficult and complicated to present.

Next year is a presidential election year and Social Security invariably has been expanded in important election years. Do you have to search for a reason? The answer is all too obvious. As a citizen it is your solemn duty to vote. Watch your legislator who is up for election or re-election and who ascends the platform ardently proclaiming his devotion to economy, his strenuous efforts to lower taxes, and in the next breath expounding the virtues of a type of legislation which, he knows in his own heart, will add billions of dollars to our already top-heavy tax load.

ELLWOOD C. WEISE, SR., M.D.

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*Hirsch, H. A., and Finland, J.
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LENGTH OF ARTICLES: Ordinary articles should not exceed 3,000 words (approximately 3 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

ILLUSTRATIONS: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted. *Connecticut Medicine* will bear the cost of printing two cuts accompanying manuscripts submitted for publication. The cost of printing more than two cuts must be borne by the author.

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Maternal Mortality In Connecticut

The third report on maternal mortality in Connecticut covering the years 1951-55 is an important document not only in view of its painstaking analysis of facts but for its interpretation as a guide for further accomplishment in lowering maternal mortality. The report also shows the awareness on the part of our obstetricians of the responsibilities of their service to the community. This is a continuity of effort arising from a previous generation and it has kept Connecticut below the national average in maternal mortality since 1926.

Many aspects of the report are worthy of emphasis beyond that of editorial notice. One of these is the fact that deaths attributable to anesthesia are strikingly low and none were due to respiratory paralysis in association with conduction anesthesia. The author suggests one reason for this is the relatively high incidence of administration by physicians. This is heartwarming and indeed an appropriate circumstance in the State in which the blessings of that benignant therapy were discovered. But beyond this signal event must be mentioned the continuing efforts of those who in our own time have made Connecticut a renowned center for the teaching of anesthesia as a major medical specialty.

Another aspect worthy of comment is the authors' observation that some preventable maternal deaths occurred because the physician was not aware of pending trouble and as they point out "one cannot make a diagnosis unless one thinks of it." The chief remedy here is obvious and is to be found in the continual effort of the physician to be a learner for a lifetime.

This is a significant report and one which will have wide reading far beyond our borders. It is an achievement which reflects one aspect of Connecticut medicine in which we can all take pride. Safety in pregnancy and parturition carries responsibilities for all who practice medicine. The reports demands their attention.

H. T.

Freedom Or So-Called Security

When the present Congress of the United States resumes its sessions after the first of the year, two pieces of legislation before it will hold particular interest for physicians, the so-called Forand Bill and HR10, the Self-Employed Individual's Retirement Bill. The later bill, sponsored by Representative Keogh, and others in the past, finally got out of committee and was passed by the House in the last session. It will almost certainly come to the floor of the Senate but its fate there is uncertain because of administration opposition expressed

through the Treasury Department, particularly by Assistant Treasury Secretary Lindsay. Should the bill pass the Senate, there is still a good possibility of a presidential veto. In that event there would probably not be sufficient majority in either house to override.

The Treasury Department objects, of course, to the immediate revenue loss. On the other hand, they make the curious claim that passage of such legislation would be unfair to salaried employees not covered by company pension funds. Nothing is said about the obvious unfairness to professional people in relation to those already covered by such funds, many of whom are enjoying greater net income than the average physician, lawyer or others.

The recent action of the A.M.A. House of Delegates which voted down unanimously three resolutions calling for compulsory inclusion of physicians in social security legislation is indicative of a continuing strong interest on the part of the profession to make its own arrangements for retirement and for survivors. There have been many claims that a majority of the profession wishes to have this coverage. These claims are based for the most part on letter and postcard polls conducted by state and county medical associations. Such a survey of 9,000 physicians in Pennsylvania indicated that 62 per cent favored social security coverage. These polls have been challenged on the grounds that they are phrased in such a way that the positive answer is favored and that physicians are not aware of all the implications of such coverage. The validity of such results is certainly questionable in the light of an experience of recent years here in Connecticut. A monthly scientific journal emphasizing health education from a professional standpoint was sent to practicing members of the State Medical Society for several years without charge. A postcard poll of the mailing list secured a very high rate of returns and the expressed wish of over 90 per cent of the respondents that they could continue to receive this journal. About three months later, due to the necessity of diverting the funds used to support this project to other activities, the mailings of the journal were discontinued. Not a single letter of protest was received!

Some medical leaders feel that acceptance of compulsory social security coverage by physicians would only help to assure passage of the Forand Bill or similar legislation. They urge that every effort be made to continue to demonstrate that physicians really mean it when they say that they wish to live and practice free of burdensome and restrictive government controls. You cannot have this cake and eat it too.

A. J. R.

The State Reorganization Program

INTRODUCTION

Coincident with the impending retirement of Dr. Stanley H. Osborn as Commissioner of Health for the state of Connecticut, Governor Ribicoff proposed to the legislature a sweeping program of reorganization for the State Department of Health which also affected many other state agencies and commissioners. The purpose of this program of reorganization is ostensibly to improve the efficiency of service of these agencies of the state to its people by eliminating unnecessary duplication of operations, coordinating closely related activities and effecting economies. This program was adopted by the legislature with only minor amendments, and the majority of its provisions are already in effect.

A new Commissioner of Health, Dr. Franklin M. Foote, has taken office. A new department of Consumer Protection has been created with Mr. Attilio R. Frassinelli, formerly head of the Commission on Food and Drugs which is now included in the new department, as its Commissioner. A new department of Agriculture, Conservation and Natural Resources has been created with Mr. Joseph N. Gill, formerly head of the Agriculture Department as its Commissioner. The Commission on Alcoholism has been put under the Department of Mental Health.

Although most of these changes have produced relatively little impact on the practice of the average physician, there are potentialities of long-term effects which deserve serious consideration. In the belief that many of the details of these changes are unfamiliar to the membership of the Connecticut State Medical Society, the Journal will attempt to review them in a series of editorials designed to inform our members and explain what appears to be the significance of the reorganization program.

I

The essence of the reorganization program for the State Department of Health is contained in Public Act 148 of the 1959 legislature. The transfer of the State Office of Civil Defense to the Military Department of the state is not included in this act, however. It is still too early to say what effect that may have on the organization of health protection as established in this office by the State Department of Health following World War II. This subject will be treated in a later communication.

The new legislation establishes three offices under the Commissioner of Health, an office of Public Health, an office of Mental Retardation, and an office of Tuberculosis Control, Hospital

Care and Rehabilitation. Each of these offices is headed by a Deputy Commissioner of Health appointed by the Commissioner of Health. The Deputy Commissioner for Public Health in the absence or disability of the Commissioner succeeds to his powers and duties as administrative head of the department.

The central policy-making authority for the Department of Health is now vested in the Public Health Council which has been enlarged from six to eight members in addition to the Commissioner of Health who serves as Chairman. The chairman of the new Council on Tuberculosis Control, Hospital Care and Rehabilitation and of the new Council on Mental Retardation are members of the Public Health Council by virtue of their office. Dr. George H. Gildersleeve of Norwich and Dr. W. Bradford Walker of Cornwall, veteran members of the Council, continue to fill the two positions on this Council which must be held by physicians. Responsibility for the overall operation and administration of the department is placed on the Commissioner.

The Commission on Tuberculosis and Other Chronic Illness has been reconstituted with the same membership as the Council on Tuberculosis Control, Hospital Care and Rehabilitation. Physician members of the Council are to be three out of seven. One must have had five years of practice and be expert in the modern (sic) treatment of tuberculosis, one must have had at least five years of practice in the treatment of chronic illnesses other than tuberculosis, mental illness or mental retardation and one must have had wide experience and be expert in the practice of medical rehabilitation. Dr. Paul Phelps, former Commission Chairman has been appointed Deputy Commissioner and Dr. James R. Miller and Dr. John C. Allen of Hartford and Dr. Sterling Brinkley of Wallingford are Council members. The Council's function is reduced to an advisory role, except that the Deputy Commissioner can be appointed only on recommendation of the Council to the Commissioner and removed only after consultation with the Council. The Deputy Commissioner is not a member of the Council by virtue of his office.

It is specifically stated that the office of Tuberculosis Control, Hospital Care and Rehabilitation shall be responsible for the planning, development and administration of complete and integrated state-wide programs for the control and treatment of tuberculosis persons; the treatment of persons affected with other chronic illness, and the medical rehabilitation of chronically ill, physically disabled and handicapped persons.

The office of Mental Retardation brings into more final form the process of consolidating state

programs in this field which had their beginning in the separate establishment of state training schools at Mansfield and Southbury. An Advisory Council for this office is established with seven members, five of whom, including one who shall be a doctor of medicine certified by the American Board of Pediatrics, shall be appointed by the Governor for terms of four years each; one shall be a member of the Board of Trustees of the Mansfield State Training School and Hospitals appointed by said Board for a term of one year, and one a member of the Board of Trustees of the Southbury Training School appointed for the same term. The Deputy Commissioner serves as an ex-officio member of the Council but without vote. At this time the Deputy Commissioner has not as yet been named. Dr. Roswell Johnson of New Britain is the pediatric physician member.

The office of Mental Retardation is charged with the responsibility for planning, developing and administering a complete, comprehensive and integrated statewide program for the mentally retarded. The Deputy Commissioner is responsible for administering and operating the state training schools, the Mansfield-Southbury social service and all state-operated community and residential facilities established for the diagnosis, training and care of the retarded. He shall also be responsible for establishing standards, providing technical assistance and exercising the requisite supervision of all state-supported diagnostic facilities, day-care centers, habilitation centers (sic) sheltered workshops, boarding homes and other facilities for the mentally retarded. He shall stimulate research by public and private agencies, institutions of higher learning and hospitals, in the interest of the elimination and amelioration of retardation and care and training of the retarded.

The boards of trustees of the training schools are to continue to advise the superintendent of each institution on general policies, conduct annual inspections, review the superintendent's annual report, and, with him, prepare a report to the Advisory Council on Mental Retardation. They may also recommend such other matters to the Council as are deemed necessary. The superintendents of the schools are appointed by the Commissioner of Health with the advice and consent of the Council. They are directly responsible for the operation and administration of these schools.

Although the separate agencies now included in this expanded Department of Health reported directly to the Governor, actually there had been in recent years very little opportunity for free communication due to the increasing number and variety of responsibilities placed on him. It is felt

that by channeling the communications through one person, the Commissioner of Health, that it will be possible to present plans, problems and achievements of all of these operations more effectively and obtain a quicker response. At the same time, the Commissioner is freed from the burden of most of the routine administrative responsibilities formerly attached to this position to concentrate his efforts on planning and coordination.

In the same fashion, communications by practicing physicians through the Connecticut State Medical Society as their spokesman may be facilitated by this reorganization. In the past, relations between the Society and the Commissioner of Health have been close and cordial. There is every reason to believe that will be so with the new Commissioner, affording both parties the greatest opportunity to improve their services to the public.

More detailed analysis of the operations of the Department of Health under each of the three Deputy Commissioners and of other effects of the reorganization will be made in future editorials. The relationship of the departments of Consumer Protection and Agriculture, Conservation and Natural Resources to medical practice will also be considered.

II

A little noticed section of Public Act No. 148 of the Connecticut State Legislature session of 1959 is section 21. Although it concerned some professional groups which have been noteworthy for their intense interest and activity on their own behalf at previous sessions of the legislature, it passed through the hearings with virtually no public opposition. The Connecticut State Nurses' Association was the only one of the affected organizations which made a vigorous protest.

This section states that the State Department of Health shall provide clerical and fiscal service to the examining boards and commissioners under title 20 of the general statutes, except the state board of veterinary registration and examinations, the state board of accountancy, the architectural examining board, the state board of registration for professional engineers and land surveyors, the pharmacy commission and the insurance commissioner. This section is not to affect the identity, manner of appointment or professional functions of any such boards or commissioners. Such boards and commissioners are to be considered a part of the Health Department for budgetary and fiscal purposes.

For some years, the Health Department has handled the secretarial services for several of these boards, but it will now be responsible for providing housekeeping services to licensing and examining boards for healing arts, physicians, home-

opathic, osteopathic, chiropractic and naturopathic practitioners, podiatrists, dentists, graduate and practical nurses, opticians, optometrists, psychologists, physical therapists, barbers, hairdressers and hypertrichologists. The process of bringing the offices of these boards in to the physical plant of the Health Department and centralizing secretarial services has already begun. Still to be accomplished are the standardization of all renewal and registration procedures on a punch card system and the staggering of registrations throughout the year to provide a more uniform work load.

It would appear to be too much to hope that the establishment of such firm administrative and budgetary controls over these boards would not in some measure find its reflection in their activities. Such changes are often subtle and may arise so gradually that they are hardly noticed but their long term effects may be considerable. It is not too much to imagine, for example, that the homeopathic examining board, which is only very rarely nowadays called upon to examine a candidate, might quietly pass out of existence.

Since the budget of the Department of Health has traditionally been a favorite target of both the executive and legislative branches of the state government when economy drives are on at the biennial sessions of the legislature, it is interesting to speculate as to the effect that the inclusion of the operating expenses of these agencies may have on the amounts granted. Although the total sum of these expenses will be a relatively small percentage of the total (about one per cent at current estimates) the number of persons affected directly and indirectly will be large.

A.J.R.

Serum Proteins Differ In Neoplasm Victims

Serum proteins of patients with neoplastic disease differ from those of normal individuals, Dr. Stuart W. Lippincott, Brookhaven National Laboratory, reported at the anniversary meeting of the New York Pathological Society.

After identification of their sera as beta or gamma globulin types by paper electrophoresis, 22 patients with multiple myeloma were injected with 10 Gm. of gamma globulin labeled with I^{131} , he said. Serial blood studies showed accelerated protein degradation.

Dr. Lippincott said that when protein from multiple myeloma patients was given to other cancer patients, they showed an abnormal protein turnover. Half-life of tagged proteins is also decreased in patients with breast or colon cancer, he added.

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COUNCIL MEETING

Wednesday, October 28, 1959

A regular monthly meeting of the Council was called to order by the Chairman, Dr. Feeney, at 2:30 P.M. on Wednesday, October 28, 1959. Present in addition to the Chairman were Drs. Gallivan, Goldberg, Richards, O'Connor, Carter, Cullen, Scully, Davis, Cornwell, Kennedy, Buckley, Blodinger, Murray, Gilman, Eddy, Pollock, Grendon, Gardner, Rentsch, Phillips and Chartier. Absent were Drs. Weise, Gens, Schiavetti and Oliver J. Purnell, newly elected Alternate Councilor from Tolland County.

ACCEPTANCE OF MINUTES. It was voted to accept the printed minutes of the Council meetings of September 2, 1959 and September 26, 1959, as corrected.

RESIGNATION FROM COMMITTEE ON PUBLIC HEALTH. It was VOTED to accept the resignation of Robert R. Keeney, Jr., Manchester, as a member of the Committee on Public Health.

RESIGNATION FROM COMMITTEE ON HOSPITALS. It was VOTED to accept the resignation of William G. H. Dobbs, Torrington, as a member of the Committee on Hospitals.

COMMITTEE ON HOSPITALS. It was VOTED to accept the resignation of Michael S. Shea, New Haven, as a member of the Committee on Hospitals and it was further VOTED to appoint Charles W. Chace, Middletown, a general practitioner, to complete Dr. Shea's unexpired term on that Committee.

COMMITTEE TO STUDY MATERNAL MORBIDITY AND MORTALITY. It was VOTED to appoint Richard D. Otis, Hartford, pathologist, as a member of the Committee to Study Maternal Morbidity and Mortality and it was further VOTED to appoint Benedict R. Harris, New Haven, internist, as a member of that Committee.

GRANT TO NATIONAL SOCIETY FOR MEDICAL RESEARCH. It was VOTED to decline the opportunity to make a grant to the National Society for Medical Research for the year 1959.

COMMITTEE ON MEDICAL CARE OF VETERANS. After full discussion of a proposal submitted by George

A. Buckhout, Bridgeport, Chairman of the Committee on Medical Care of Veterans, that a special committee be formed for the purpose of developing public relations and legislative programs, designed to curtail the abuses of the VA hospitals and clinics in the state and to effect return of much of the VA program to private practitioners and private hospitals, it was VOTED that this proposal be referred to the Committee on National Legislation. It was further VOTED to recommend on that Committee, that in cooperation with the Committee on Medical Care of Veterans, action be taken to develop positive legislative approaches toward curtailing the encroachments of the VA on the private practice of medicine.

REQUEST FROM COMMITTEE ON MEDICAL EDUCATION AND LICENSURE. Considering the request of the Committee on Medical Education and Licensure that the Council "define reasonable expenses of a committee of the Society", it was VOTED to inform the Committee that, in the Council's opinion, the allotted annual budget of each committee was for the purposes of covering such usual costs as printing, mailing, dinner meetings, etc., and that appropriations for such special meetings, etc. can be recommended to the Council by the Committee's Chairman for approval, such recommendations to be submitted in advance of the proposed special activities.

RESIGNATION FROM COMMITTEE ON INDUSTRIAL HEALTH. It was VOTED to accept the resignation of William M. Stahl, Jr., Danbury, as a member of the Committee on Industrial Health and it was further VOTED not to appoint a replacement for Dr. Stahl.

RESIGNATION FROM COMMITTEE ON ACCIDENT PREVENTION. It was VOTED to accept the resignation of William M. Stahl, Jr., Danbury, as a member of the Committee on Accident Prevention.

COMMITTEE ON STATE BLOOD BANK. It was VOTED to appoint Donald W. King, New Haven, as a member of the Committee on State Blood Bank to replace Levin Waters, New Haven, resigned.

BUDGET COMMITTEE FOR 1960. It was VOTED that the Chairman of the Council appoint a Budget Committee to prepare the budget for 1960.

The Chairman thereafter appointed the Committee as follows: Isadore S. Goldberg, Torrington, Chairman; Ralph L. Gilman, Storrs; Michael R. Scully, Bridgeport; Israel E. Blodinger, New Haven; and William R. Richards, New Haven.

STATE ADVISORY COMMITTEE ON MATERNAL AND CHILD HEALTH SERVICES. A letter from Franklin M. Foote, Commissioner of Health, Connecticut, requesting the assistance of the Council in obtaining representatives of the Society to serve on the Connecticut State Advisory Committee on Maternal and Child Health Services, was presented. After some discussion, it was VOTED to refer this matter to the Committee on Public Health, since the Advisory Committee is a sub-committee of that body.

SEMI-ANNUAL MEETING OF HOUSE OF DELEGATES. It was VOTED to invite Dr. Franklin M. Foote, State Commissioner of Health, to address the House of Delegates at the semi-annual meeting on December 9, 1959.

COMMITTEE OF CONNECTICUT HEALTH CAREERS. Full consideration was given to a request by Bernard F. Mann, Jr., New Haven, Chairman of the Committee on Health Careers, that the Council approve an annual budget of approximately \$5,000 for the operation of what would amount to a full-time agency of the Society, the purpose of which would be to maintain, improve and expand the Health Careers Program. It was VOTED *not* to approve such an appropriation at this time and it was further VOTED to recommend to the Committee on Health Careers that the program be carried on, as far as possible, at the county level encouraging full participation by the members of the county medical associations and their Women's Auxiliaries. It is understood that the Secretary's office will cooperate fully with the Committee in carrying on its business at the state level.

DISCUSSION OF CMS. There was prolonged and detailed consideration given to all of the Society's activities which are being conducted jointly with representatives of CMS. Dr. Feeney gave a progress report on various aspects of the development of a new contract which have been under discussion at recent Joint Liaison meetings. He reported that the determination of the median family income in Connecticut, as would apply to the CMS "family", has yet to be made and that figures from various federal and state agencies do not appear to be suitable for use for this purpose. He outlined an alternate method proposed by Mr. David Pinsky, a statistician, who has been consulted by the Council. The method, in essence, would involve an attempt to relate CMS experience in service benefit contractual payments for all surgical procedures to average wages in the state, both factors being de-

termined for the past four years. Through this mechanism, and by projection, it might be determined by what percent the present service income level would have to be raised to provide 50% coverage of CMS members, not only on a family basis but also under the "subscriber and spouse" and individual contracts.

Although there is no assurance that this is a valid method of reaching a completely accurate figure as to that income level at which 50% of CMS members would be entitled to service benefits, the Council felt the proposal had great merit and should be thoroughly explored. It was therefore VOTED to recommend to the CMS Board of Directors, as a direct communication from the Council, that this method of approach be approved by the Board and that, if approved by Mr. David Pinsky of Hartford be allowed to examine CMS claims payments and other records for the purpose of obtaining data which might be used to assist him in making median income determinations by the method he has proposed. It is understood that in examining CMS records, Mr. Pinsky would work with qualified personnel employed by the CMS organization. It is also understood that any conclusions drawn from this study would be considered jointly by the Council and the CMS Board for the purpose of determining their validity.

It was VOTED to appropriate the sum of \$200 on which to draw payment for Mr. Pinsky's services to date, at such time as he submits a statement.

Reports were also made on matters pertaining to the progress of the CMS Medical Advisory Committee toward changes in existing contracts or the development of new contracts; on the invitation of the CMS Directors for appointed Council members to meet jointly with representatives of CMS for the purpose of learning from Mr. Jay Ketchum of Medical Indemnity of America, Inc. what his organization might be able to offer CMS by way of providing major medical coverage, which may be added to a new basic CMS contract, when such a contract is developed; and on the possible interim use of one of the existing Relative Value Scales in revising CMS payment schedules. The Council collectively reaffirmed its belief that, in the public interest, improved and expanded CMS contracts are both desirable and necessary and should be developed at the earliest possible time consistent with sound planning.

Dr. Gallivan discussed at some length the legality — and particularly the desirability — of polling the Council by mail for the purpose of gaining approval for certain proposed actions. There was general agreement that if this method of obtaining Council approval were used at all, it should be reserved rather exclusively for "emergency" decisions.

A proposed change in the CMS by-laws, approved by the Executive Committee on October 8, 1959 and to be acted on by the Board of Directors on October 29, 1959, reads as follows:

"Articles I and III of the by-laws be amended to comply with the provisions of Section 33-170, Chapter 593 of the General Statutes, Medical Service Corporations, as amended by the 1959 Session of the General Assembly requiring '... the election of at least three of its policyholders to its Board of Directors by its members'."

LEGISLATIVE CONFERENCE. The Legislative Conference, held in New Haven on October 14, 1959, was reported on briefly. It was felt that the meeting had been well-planned and informative and should prove of great value to physicians in taking whatever legislative action they may decide upon with respect to certain medical bills now under consideration in Washington, D. C. It was VOTED to appropriate the sum of \$200 to cover the cost of the collation which was served.

The Secretary reported on legislative activities being planned by various city and county groups and on the communications program which had been developed by the Public Relations officer, Mr. Burch, to provide these groups with materials and information to assist them in their work.

OPINION SURVEY. The "Opinion Survey" questionnaire, in reasonably final form, was submitted by the Council's Sub-Committee on Opinion Survey with the recommendation that the document be approved and that this Survey be conducted prior to, and independent of, the Relative Value Study. It was VOTED to approve the submitted "Opinion Survey" questionnaire and it was further VOTED to conduct the survey separately, as recommended by the Sub-committee.

It was recalled to the Council that at a recent meeting of the CMS-CSMS Joint Liaison group, it had been agreed that when approaching completion, the Survey questionnaire would be made available to the CMS component of the Liaison group for information and for discussion at a joint meeting. It was VOTED that this agreement would be fulfilled as soon as practicable.

EVALUATION AND ESTIMATE OF COST OF OPINION SURVEY AND RELATIVE VALUE STUDY. A document prepared by Mr. Roscoe Edlund of the firm of Rogers, Slade and Hill, New York City, was examined by the Council. This document outlined a method for conducting the Opinion Survey and Relative Value Study and gave an estimate as to the cost of completing these projects. Adding on such costs as would be borne directly by the Society, it is believed that the total expenses involved in carrying out these two studies would be approximately \$30,000. After considering several methods

of financing these ventures, it was VOTED to recommend to the House of Delegates at the semi-annual meeting on December 9, 1959, that this expense be met by placing a one year assessment in the amount of \$10 on each dues-paying member of the Society for the year 1960.

PROPOSED NEWSLETTER. A proposed "Newsletter" was submitted to the Council as a possible means of improving communications between the Society, its Council, its committees and its members. The per issue expense of such a publication would be about \$375. After giving this proposal full consideration, it was felt that, especially at this time, any mechanism which might increase the knowledge and awareness of the members in respect to the current problems facing the medical profession should certainly be utilized and, therefore, it was VOTED to authorize five issues of such a "Newsletter" between now and the end of June, 1960 on a probationary basis. It was further VOTED that these issues should be prepared through the joint efforts of the Public Relations Officer, the Editor of the Journal and the General Manager and that the sum of \$2,000 be appropriated to finance this trial publication during the period prescribed.

LETTER FROM STANLEY H. OSBORN. The following letter was received by the Council from Stanley H. Osborn, recently retired State Commissioner of Health:

"Thank you very much for notifying me of the motion introduced by Dr. Isadore S. Goldberg of Torrington, concerning my public health activities in Connecticut and together with a copy of the resolution passed by the Council of the Society at its September 2nd meeting. It pleased me deeply to read that it passed enthusiastically and unanimously. Please convey to the members of the Council my deep appreciation of their action in such a heart warming way."

RESOLUTION FROM SECTION ON ORTHOPEDICS. The following resolution from the Section on Orthopedics was reviewed by the Council.

WHEREAS: It has come to the attention of the Orthopedic Section that CMS has initiated payments to chiropractors for certain surgical procedures as set forth in the January 1959 issue of the CMS Physician's Bulletin; and

WHEREAS: Payments to chiropractors by CMS for such procedures tends to create in the public mind the impression that the services of chiropractors are equivalent to those of licensed doctors of medicine; and

WHEREAS: This wrongful impression gains strength from representations made on sundry occasions by CMS that it is the "Doctors' Plan"; and

WHEREAS: Such representation is now mis-

leading and detrimental to the public interest; and

WHEREAS: Chiropodists secured authorization by the Connecticut General Assembly for their inclusion in CMS without effective protest on the part of the Connecticut State Medical Society; therefore

BE IT RESOLVED: That the Orthopedic Section deplores the authorization by CMS of payments to chiropodists as against the public interest, and requests reconsideration by CMS of this action; and further

That the opposition of the Section to payments to chiropodists in any future contracts be brought to the attention of the Liaison Committee of the Council of the State Medical Society and to the State Insurance Commissioner; and further

That the Section urges CMS to forego further extension of coverage to services not rendered by licensed doctors of medicine; and further

That the Section believes that if CMS cannot uphold the public interest by restricting its coverage to services rendered by doctors of medicine it should cease to represent itself as the "Doctors' Plan" or any verbal equivalent thereof; and further

That the Section condemns the State Medical Society for failure to maintain adequate protection of the Section's interest at the General Assembly; and further

That the Section recommends that the State Medical Society maintain adequate representation at the General Assembly to protect its own and the public interest.

After some discussion, it was VOTED to transmit the resolutions in its entirety to the Board of Directors of CMS for consideration and possible action and to further pursue this matter at the next meeting of the CMS-CSMS Joint Liaison group.

POLIO PROGRAM. The Council considered a Resolution submitted by the Full-time Directors of Health of Connecticut, dated September 28, 1959, which reads as follows:

"Whereas: The National Foundation has an ethical policy in regard to cooperation with the local health departments; and

Whereas: Most of the local units have operated in keeping with this policy; and

Whereas: In some instances local units of the National Foundation have attempted to initiate public health programs for the prevention of poliomyelitis without consulting with the local Director of Health; and

Whereas: Local health departments have been carrying on such programs for many years as part of their legal responsibility, therefore

Be It Resolved: 1) That the state representative of the National Foundation be appraised of these facts; and 2) That it be requested that in the future all such programs be initiated and publicized only after formal discussion with and approval by the local Director of Health."

It was VOTED to endorse the resolution of the Health Directors and forward a copy of the resolution, bearing the Council's endorsement, to the National Foundation.

AMEF RESOLUTION RE ANNUAL ASSESSMENT. It was VOTED to transmit the following Resolution, submitted to the Council by the AMEF Committee, to each of the eight county medical associations for action at its next regular or special meeting.

"Be It Resolved: That the County Medical Association approves the annual assessment of ten dollars on each member of the Connecticut State Medical Society as a contribution to the American Medical Education Foundation, beginning in the year 19. . . , and

Be It Further Resolved: That each member of the Society, so assessed, reserves the right to assign his contribution to the medical school of his choice or to the AMEF General Fund, and

Be It Further Resolved: That this resolution be transmitted to the Council of the Connecticut State Medical Society with the recommendation that such an assessment be made on each member of the Society and that the resolution be placed on the agenda of the next meeting of the House of Delegates for consideration and action."

AMEF RESOLUTION RE DUES INCREASE. It was VOTED to transmit to the House of Delegates, at its semi-annual meeting on December 9, 1959, the following recommendation of the AMEF Committee: That the voluntary dues increase of \$15 per member of the Society to AMEF, approved as a donation to AMEF for the year 1959, be continued in 1960.

PUBLIC RELATIONS ACTIVITY REPORT. The following "Public Relations Activity Report", prepared by James G. Burch, Public Relations Director, was received by the Council as information. The Council expressed satisfaction with the report.

COMMUNICATIONS AND PUBLIC RELATIONS ACTIVITIES DURING THE PAST FEW WEEKS

1. *News Releases* — Five news releases were written and distributed in advance for the Clinical Congress. Other releases concerned the Country Fair project (exhibits at 12 country fairs) sponsored by the Society's Committee on Rural Health, in cooperation with the Women's Auxiliary, and participation of Connecticut medical leaders in the

Conference on Problems of the Aging, sponsored in Boston, September 16-17 by the American Medical Association in cooperation with the medical associations of the New England States and New York.

2. *Press Coverage of Clinical Congress* — Facilities were provided for press coverage at the Clinical Congress, September 30 in New Haven. News writers from New Haven and Hartford attended the sessions and the articles that were written were published in newspapers in these communities and made available through wire services for all other Connecticut newspapers and for newspapers in other states. This information also was made available to radio and television stations.

3. *Legislative Communications* — In cooperation with the office of the general manager, a program of legislative communication was initiated, the first major step being a Conference on Legislative Communications, which was held in New Haven, October 14. County officers and other association leaders were invited to meet with the Council. Kits of informative material were prepared and distributed for their use in considering programs for action in local areas.

Approximately 50 of the 90 leaders invited attended the conference. The program is now being followed up at county level, where encouraging activity is already in progress. A main accent of the program will be to interest other professional groups, and business and community leaders in the problems facing free enterprise through such instruments as the Forand Bill (HR 4700) and to further communicate with legislators in the various districts. This phase of the program is scheduled for completion by mid-December, since Congress plans to reconvene early in January.

4. *Health Careers* — Although the director of public relations is withdrawing from operational activities in the health careers program, several prior commitments have required attention. One of these was an invitation of a number of months ago to address members of the Second National Conference on Recruitment sponsored by the National Health Council on the relationship and communications aspects of programs to awaken the interest of young people in medical and para-medical careers. This conference was held at the Bar-bizon-Plaza Hotel, New York, October 1 and 2, and the interest displayed in the Connecticut program by the national leaders attending was highly commendatory. The American Medical Association is an organization member of National Health Council and membership includes virtually all national organizations concerned with the training of para-medical personnel.

5. *Exhibits* — The display of health exhibits at 12 country fairs this year resulted in directing the

attention of many thousands of fairgoers to the importance of consulting their physician for vaccinations against poliomyelitis and tetanus.

Because of the successful use of exhibits of this type, the Public Relations Committee plans to increase the number of these so that they may be made available for long-term loan to county associations to advance local programs.

6. *Meetings* — Most of the semi-annual meetings of the county medical associations were attended, also a number of committee meetings and the meetings previously referred to in Boston and New York.

7. *Emergency Call Plans* — Information was furnished for publication of articles concerning the operation of emergency medical call plans by Connecticut medical associations and these articles were published in the *Hartford Courant* and the *Hartford Times*.

As this report was being written, a flood of post-card and letter requests were being received in response to these articles for copies of the emergency leaflet and card published by the Society. These explain the operation of the plans, most of which are advanced by publication of a display advertisement in the classified section of the local telephone directory. The leaflet and card list the telephone numbers of the plans, which now operate in 17 major population centers and make emergency service available to an estimated 80 per cent of the state population.

Many persons requesting copies of the emergency publications have taken the trouble to write letters commending the plans as outstanding community service programs. Articles concerning the plans in other major communities are also being considered.

Public Relations Director
JAMES G. BURCH,

COMMITTEE ON NATIONAL LEGISLATION. It was VOTED to appropriate a contingency fund of \$500 to be made available to the budget of the Committee on National Legislation for the purpose of reproducing and mailing legislative communications which may be deemed necessary by the General Manager.

ELECTION OF STUDENT MEMBERS. It was VOTED to elect 25 applicants to Student Membership. The list appears following these minutes.

SURVEY OF MALPRACTICE SUITS. It was VOTED to give Dr. Robert L. Wyckoff a blanket letter of introduction to all members of the Society. Dr. Wyckoff is presently pursuing graduate legal studies at the Yale Law School and proposes to conduct a survey of the community, professional and economic effects on physicians against whom malpractice or other legal actions have been taken.

MEMBERSHIP IN CHAMBER OF COMMERCE. It was VOTED that the Connecticut State Medical Society seek organizational membership in the Chamber of Commerce and that the General Manager be its principle representative. It was further VOTED to appropriate the sum of \$50 to be used for payment of the annual membership dues of the Society in that organization.

DATE OF NEXT MEETING. The date of the next meeting of the Council was scheduled for Thursday, November 19, 1959.

W. R. R.

The Society's Placement Service is in receipt of the following:

Meetings Held In November

- 4 Advisory Committee on Nutrition.
Joint Conference Committee with the Pharmaceutical Association
- 5 Budget Committee.
Committee on Relative Value Studies.
- 12 Committee on Public Health.
Committee on Public Relations.
Advisory Committee on School Health.
- 18 Committee to Study Maternal Morbidity and Mortality.
Committee on Hospitals.
- 19 Council.
Committee on Postgraduate Education.
- 25 Sub-committee on Toxemia.
Committee on Accident Prevention.

MEETINGS TO BE HELD IN DECEMBER

- 2 Advisory Committee on Nutrition.
- 9 Semi-annual Meeting of House of Delegates.

PLACEMENT OPPORTUNITIES

Salaried position with the State of Connecticut:
Minimum Qualifications, Knowledge, Skill and Ability: Thorough knowledge of the principles and practices of medicine and surgery with special reference to internal medicine and chronic diseases; administrative ability; ability to deal effectively with others.

Special Requirements: Eligibility for a license to practice medicine and surgery in Connecticut. Possession of a motor vehicle operator's license at time of appointment.

There is an opportunity for a general practitioner in Fairfield.

In Fairfield there is need for an allergist. There has been a recent vacancy in Fairfield Center for lease.

FOR FURTHER INFORMATION COMMUNICATE WITH THE EXECUTIVE SECRETARY'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN, CONN.

PLACEMENT WANTED

Kenneth C. Appel, age 36, M.D. Georgetown University School of Medicine 1951 — General Surgical residency, V. A. Hospital, Brooklyn, N. Y., 1953-1957 — Specialty: Surgery, association, group or hospital practice.

ANY MEMBER OF THE SOCIETY KNOWING OF AN OPPORTUNITY FOR PLACEMENT OF THE ABOVE PHYSICIAN IS ASKED TO COMMUNICATE WITH THE EXECUTIVE SECRETARY'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

Student Members Elected

- John M. Ahern, New Haven—Jefferson Medical School, Class of 1963.
- Joan F. Bassinger, Warehouse Point—Tufts University School of Medicine, Class of 1963.
- Robert A. Buccino, Easton—Harvard Medical School, Class of 1963.
- Thomas W. Callan, Bridgeport — Georgetown University, Class of 1963.
- Walter J. Carroll, Bridgeport—State University of New York, Class of 1963.
- Edward J. Chopskie, Bridgeport — Georgetown University, Class of 1963.
- Martin Epstein, West Hartford—Duke University School of Medicine, Class of 1963.
- Samuel C. Himmelstein, Hartford—State University of New York, Class of 1963.
- Louis R. Jordan, Southport—Cornell Medical College, Class of 1963.
- Arthur T. Judge, Jr., West Hartford—Tufts University School of Medicine, Class of 1963.
- Harriet A. Karkut, Shelton—Woman's Medical College of Pennsylvania, Class of 1963.
- Robert G. Long, Mansfield Center—Albany Medical College, Class of 1963.
- Gerald L. Mackler, West Hartford—College of Physicians & Surgeons, Class of 1963.
- James A. Mason, Woodmont—Johns Hopkins, Class of 1963.
- Daniel D. Morgan, Jr., Hamden—College of Physicians & Surgeons, Class of 1963.
- Carlton R. Palm, Hamden—N.Y.U. College of Medicine, Class of 1963.
- Richard W. Papp, Fairfield—Dalhousie Medical School, Class of 1964.
- Peter I. Rabinovitch, Norwich—University of Vermont, Class of 1963.
- Frank W. Read, Old Greenwich—Tufts University School of Medicine, Class of 1963.
- Gaylord H. Rockwell, Danbury—Yale University School of Medicine, Class of 1963.
- Albert F. Sheehy, Shelton—University of Rochester, Class of 1963.
- Donald F. Sprafke, Meriden—Georgetown University, Class of 1963.
- Roger W. Turkington, Manchester—Harvard Medical School, Class of 1963.

William E. Wallis, Stamford—University of Rochester, Class of 1963.

Seth M. Weingarten, Bridgeport—Yale University School of Medicine, Class of 1963.

New Members

NEW HAVEN COUNTY

Harold Y. Allen, New Haven.
George Bosse, Waterbury.
Marion R. S. Brown, Meriden.
Howard D. Fink, Milford.
Daniel G. Fischer, Hamden.
Marvin I. Fox, Milford.
Ira W. Gabrielson, New Haven.
Frank L. Gruskay, New Haven.
Mary F. Keohane, New London.
Francis MacKay, New Haven.
Allen H. Minor, Guilford.
John Y. Pyo, New Haven.
Edwin C. Severinghaus, New Haven.
Richard L. Shelling, West Haven.
Howard W. Smith, New Haven.
Philip Warren, Waterbury.
Dorothy J. Whittaker, New Haven.

WINDHAM COUNTY

Charles F. Sornberger, Hampton.
William A. Whaley, Jr., Willimantic.

TOLLAND COUNTY

Brendan E. Melvin, Stafford Springs.

At a special meeting of the Corporation of Connecticut Medical Service, Inc., the by-laws of the Corporation were changed as authorized by action of the Board on June 17, 1959 and as recommended to the Corporation by the Executive Committee on October 8, 1959. These changes were made to comply with the provisions of Section 33-170, Chapter 593 of the General Statutes, Medical Service Corporations.

It was duly moved, seconded and voted:

That Section 1, Article I, and Section 1, Article III be amended to read as follows:

Article I — Members

Section 1. Nominations. There shall be sixteen Members of the Corporation, *at least three of whom must be policyholders*. Eight members shall be Participating Physicians nominated by the Council of the Connecticut State Medical Society, and eight shall be laymen nominated by a Nominating Committee appointed by the President of the Corporation.

Article III — Board of Directors

Section 1. Composition. The control of the business and affairs of the Corporation shall be in a Board of Directors, which shall consist of the Members of the Corporation. *At least three of the Directors must be policyholders.*

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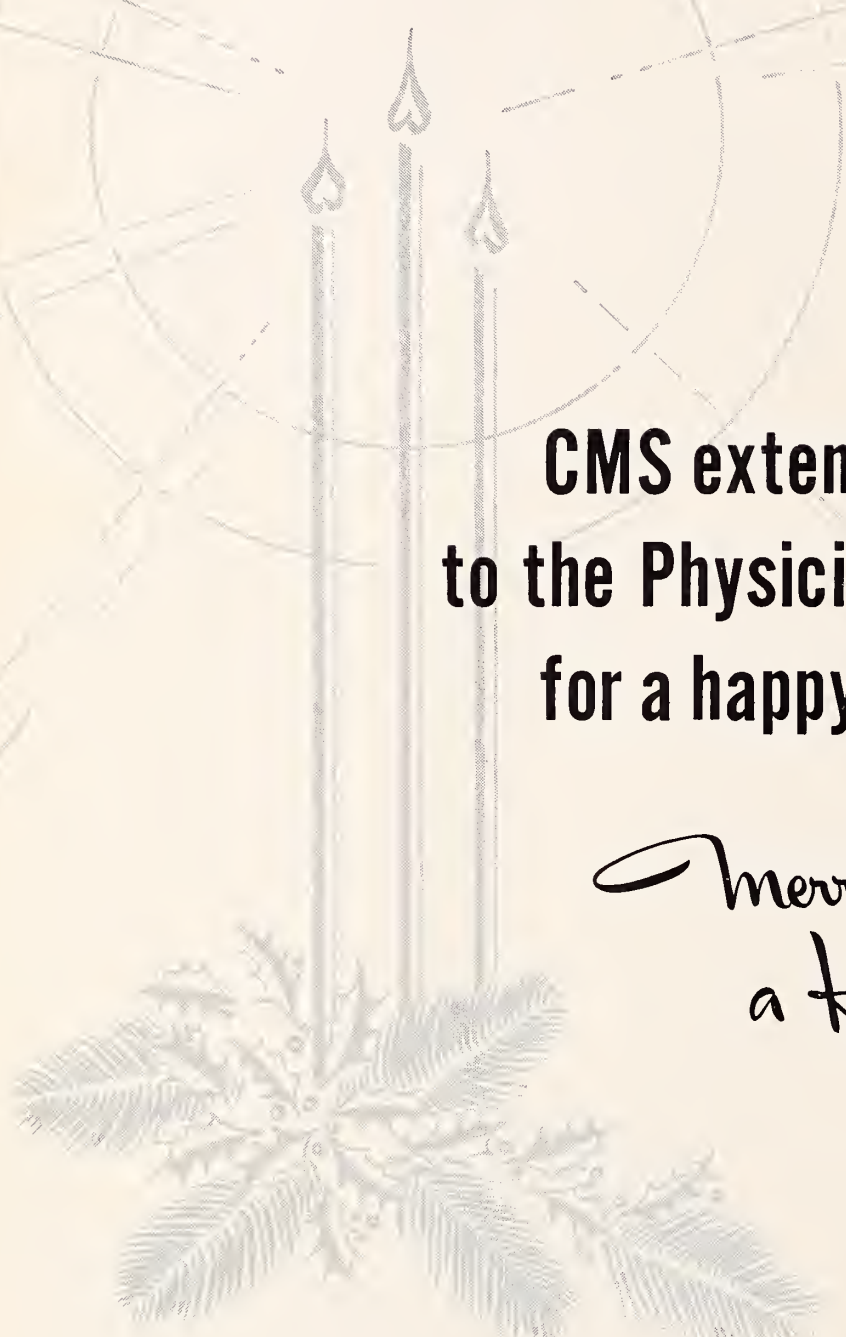
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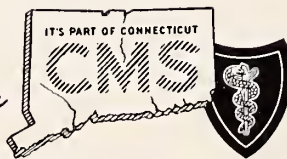
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Special Article

The Use Of Apomorphine In Poisoning

F. S. VOGEL, M.D.

Bristol

A SHORT while ago the Connecticut State Department of Health distributed Circular Letter No. 7, dealing with "Medications as Source of Accidental Poisoning." During the first six months of its existence the Poison Information Center of the Health Department found that 28 per cent of the poisoning incidents were caused by medications. The majority of the victims were under five years of age.

In the *J.A.M.A.* of October 3, 1959 Dripps et al. discuss the "Medical, Sociological and Legal Aspects of Suicide." According to studies in 1956 suicide is the eleventh leading cause of death—about equal with cirrhosis of the liver. In the U.S. there are 17,000 deaths per year due to successful suicides (10 per 100,000 population). A major percentage of the victims is among the older age groups. Statistics on attempted suicides are difficult to gather. "Medical experience and the examination of police records suggest that the taking of barbiturates and other sedatives, as well as cutting and slashing are the methods most commonly applied in attempted suicides."

One week later the *J.A.M.A.* (October 10, 1959) reported that the American Association of Poison Control Centers held a meeting in Chicago during the annual session of the American Academy of Pediatrics early October 1959. It became known that the magnitude of the problem has been recognized by our Congress and that the President may proclaim a National Poison Prevention Week.

The writer of this communication learned in Europe that some physicians when prescribing a barbiturate (or perhaps other potentially hazardous drugs) add to each dosage of the medicine a small amount of apomorphine. If the patient takes for instance 10 doses (be it by mistake or in an attempt of suicide), the quantity of apomorphine which he

then swallows would be sufficiently large to cause vomiting and thus prevent poisoning.

The idea of adding an emetic to dangerous drugs impressed this correspondent and, lacking knowledge of its practical results, he embarked on reading up on apomorphine. He found the pharmacological data enlightening enough to share them with interested colleagues by quoting some in the following paragraphs.

From "A Manual of Pharmacology" by Sollmann, 1942:

"Apomorphine is an artificial alkaloid, formed by dehydrating morphine through concentrated mineral acids. . . . The action of the base that is formed differ radically from those of Morphine. It does not cause narcosis; its chief effect is emesis, by direct stimulation of the vomiting center, with prolonged and severe nausea which may result in collapse. Small doses are sedative and hypnotic; larger doses cause excitement, convulsions and death by asphyxia. . . . Apomorphine is the predominant centrally acting emetic, especially useful for hypodermic administration in poisoning. The prolonged nausea is disagreeable and the depression may be dangerous. . . . It is believed by some that the accidents are due to impurities, so that only freshly made solutions of the crystallized alkaloid should be used, never of the amorphous."

From "The Pharmacological Basis of Therapeutics" by Goodman and Gilman, 1956:

"Vomiting induced by drugs may result reflexly from a direct non-specific irritant action on the oropharyngeal and gastrointestinal tracts; from stimulation of the nodose ganglion of the vagus (veratrum); from excitation of receptors and other organs; from stimulation of portions of the central nervous system rostral to the brainstem (pilocarpine, perhaps mechloramine); and from excita-

tion of the chemoreceptor trigger zone (CTZ) for emesis located in the area postrema of the medulla oblongata (morphine, apomorphine, hydergine, digitalis glycosides). Centrally acting drugs formerly thought to stimulate the medullary vomiting center directly, in reality cause emesis by excitation of the CTZ of the forebrain and hypothalamus; . . ."

"The clinical value of emetics is very limited indeed. The increasingly wide use of the stomach tube has relegated emetics to deserved obsolescence. . . . Emesis, induced by centrally acting drugs, especially apomorphine, may be followed by severe depression. Particularly in cases of acute poisoning by central nervous system depressants, emetics may fail to work and may cause additional central depression. The marked and sudden changes in blood pressure during vomiting may cause cerebrovascular accidents in hypertensive and arteriosclerotic patients. The possibility of rupture of an aortic aneurysm, of hemorrhage in pulmonary tuberculosis and of abortion in pregnancy must also be considered."

From "Drugs of Choice" by Modell 1958, page 898:

"Hospitals and dispensaries which wish to pro-

vide for emergency treatment of common forms of poisoning should have the following drugs available for immediate use; . . . Apomorphine (parenteral) . . ."

Page 189: "Apomorphine Hcl. Administration. Subcutaneous. Dosage form: Hypo tablet. Remarks: Solutions darken and deteriorate."

Page 849: "Apomorphine. Given subcutaneously this drug usually causes prompt vomiting. Since it is a respiratory depressant, it should not be given if the patient is in coma, if respirations are slow and labored, or if the poisoning is by a respiratory depressant. Because of its narcotizing action, some authorities feel it should never be used if any other emetic is likely to be effective or gastric lavage can be performed safely. The recommended subcutaneous dose is six mg. for adults, one or two mg. for children one to two years old."

From the above quoted observations it appears certain that the use of apomorphine for the prevention of mishaps or suicides with toxic drugs would prove to be impractical: too dangerous and/or ineffective.

Question: Is there among the newer drugs perhaps a harmless emetic which could do the work?



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Rural Health Conference

The Woman's Auxiliary to the Connecticut State Medical Society was represented at the Connecticut Health League conference on rural health held at the University of Connecticut on September 30, 1959. Members of the Windham County Auxiliary served as registrars.

Doctor Norman Gardner gave an informative talk on the special problems involved in providing medical care to rural communities across the country.

A panel discussion concerning the rural health needs in Connecticut followed. The afternoon was devoted to group meetings and discussions.

STELLA C. GALLIVAN, Chairman
Community Service and Rural Health

November-December County Calendar

Fairfield—December 1, 1959. Fund raising program and luncheon fashion show at Stonhenge, Ridgefield.

Hartford—November 7, 1959. Sixth annual medi-

capers for the benefit of the memorial scholarship fund.

Litchfield—None scheduled.

Middlesex—November 10, 1959. Regular meeting and program with Doctor G. Mansfield Craig, guest speaker.

New Haven—November 6, 1959. Semi-annual meeting, Yankee Silversmith, Wallingford. December 10, 1959, 3:30 P.M. to 5:30 P.M. Reception for Resident Staff Doctors' Wives of New Haven County Hospitals at the home of Mrs. Emil Karlovsky, 30 Race Brook Terrace, Orange. All auxiliary members are urged to attend to meet these young doctors' wives.

New London—November 10, 1959. Membership Tea at the home of Mrs. James Sturtevant.

Windham—November 5, 1959. Program for high school pupils presented at the Day-Kimball hospital in Putnam. Students may sign up for their main career interest and will be given a concentrated talk by the department head. This will be followed by the showing of an appropriate movie and a social hour.

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*Thompson, R. E., and Hecht, R. A.: Am. J. Clin. Nutrition 7:311-317 (May-June) 1959.

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Around The State

Fairfield County

Melville G. Magida is taking part in a series of seminars for in-service training of rehabilitation counselors to be sponsored by the Connecticut Heart Association in conjunction with the State Department of Education, Bureau of Vocational Rehabilitation. The sessions began November 4th.

Jere W. Lord, Jr., attending surgeon at the University Hospital of New York-Bellevue Medical Center, spoke on "The Present Status of Cardiac Surgery" at a meeting of the Bridgeport Medical Association on November 3rd in the University Club. Dr. Lord showed slides and a movie on open heart surgery, prepared by Dr. W. H. Muller, of the University of West Virginia.

Hartford County

Morris J. Seide has been named Medical Director of the Hartford Heart Association's new Cardiac Work Evaluation Unit. Dr. Seide, who is a graduate of the University of Chicago School of Medicine, has a practice of internal medicine in West Hartford and is also associated with the cardio-respiratory laboratory of the Hartford Hospital.

Benjamin Thaw, chairman of the Connecticut State Medical Society's Relative Value Study Committee, addressed the Hartford County Chapter of the Connecticut Academy of General Practice at the Hotel Statler Hilton in Hartford. Dr. Thaw discussed the objectives of the newly formed committee and outlined the meaning of the relative value fee schedules.

William R. Hanrahan, dean of Bristol physicians, was a speaker at the testimonial dinner given to Ralph A. Richardson by Bristol lodge of Elks at its home on November 10. Dr. Hanrahan, who like Dr. Richardson is retired, practiced medicine for 53 years. Dr. Richardson was honored in appreciation of his many contributions to the community. During World War II he was head of the Medical Division of the Bristol Draft Board and for more than 30 years was chief of staff of Bristol Hospital. H. W. Winters, chief of staff of the Bristol Hospital was also a guest speaker at the testimonial dinner.

Harry Apter, Sidney Burness, James A. Carroll, Walter P. Gerent, Harry Golston, Robert Jreissaty,

William J. Lahey, Arthur B. Landry, J. Richard Lenehan, C. E. McLean and Peter V. Stoughton, attended the 32nd Annual Convention of the American Heart Association in Philadelphia recently.

Physicians from other Connecticut communities included: Gerald H. Payne, New Britain; Benison Calef, West Hartford, Richard P. Johnson, Rocky Hill; Donn C. Barton, Portland; Frederick A. Beardsley, Willimantic; G. Robert Downie, Winsted; Franklin B. Watters and Philip Lipton, Newington; Fred Tirella, Bristol; Jacob A. Segal and Harold J. Lehans, both of Manchester.

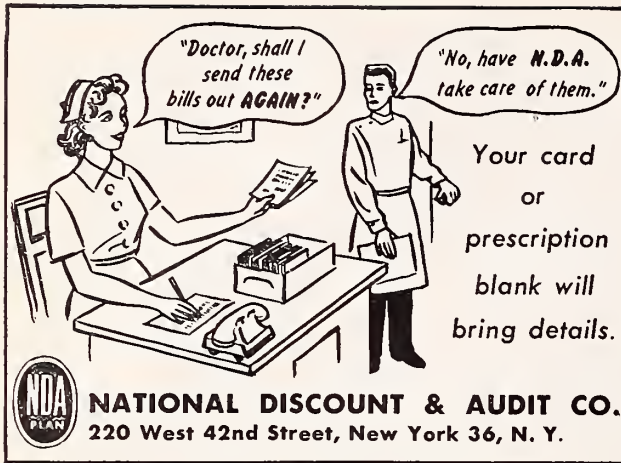
New Haven County

The semi-annual meeting of the county association was held in Meriden, October 22nd. In an opening address Ellwood Weise, President of the State Society, called attention to the dangers involved in the Forand bill. This bill is slated as a priority item for discussion and consideration by Congress in its next session, which convenes in January. Describing the bill as an entering wedge for national compulsory health insurance, Dr. Weise stressed that it would be a sad day for the nation if such legislation were allowed to pass.

William Richards reminded members that while the association could not assume a role in politics, as individuals they had the right and obligation to do so. Of especial importance at this time is a concerted effort to acquaint congressmen with the undesirable features of Forand type legislation. Physicians should act as leaders to bring together responsible members of their communities for talks with congressmen. Jack Davis pointed out that membership in local chambers of commerce provided an effective way for doctors to make their voices heard in community affairs.

Israel Blodinger, councilor, reviewed the recent work of the State Council. A revised contract is being actively discussed with CMS. It is hoped to extend present coverage and introduce "major medical" provisions. A present task is to arrive at a figure which accurately represents the median income of Connecticut families. When a new contract has been tentatively drawn it must be submitted for consideration to the Council, County Associations and House of Delegates before adoption.

The names of Allan Ryan, Mario Garofalo and Louis Backhus have been submitted as nominees



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for election to the Medical Advisory Committee of CMS.

Members of the association have been doing an excellent job staffing polio inoculation clinics, as indicated by a letter from Mayor Lee congratulating the doctors of New Haven in this respect. The fees earned by physicians in this work are turned over to the Educational Foundation of the American Medical Association. Orvan Hess reported that approximately \$3200 has been donated so far, with returns as yet incomplete.

The meeting concluded with a stimulating panel discussion of the topic "Should Connecticut Physicians Lead or Follow in the Health Insurance Movement". The panel was moderated by Ellwood Weise, participants from New Haven County including Max Caplan, Israel Blodinger and William Richards, and from Hartford County Kenneth Branden and Benjamin Thaw.

Anthony J. Mendillo, former surgeon in chief at Grace-New Haven Hospital, addressed the Amity Club on "50 Years of Surgery" at its meeting in the Union League recently. At the conclusion of his talk, Dr. Mendillo was presented with a certificate of appreciation by Judge George G. DiCenzo, president.

William H. Good and Philip S. Good have recently returned from a week's session of the American Academy of Ear, Eye, Nose and Throat Specialist Convention held in Palmer House in Chicago.

Charles L. Larkin, Jr., of Waterbury, discussed "Cardiac Arrest" at the Charlotte Hungerford Hospital monthly staff meeting.

On November 15th, at the Southbury Training School, the Grover F. Powers Hospital, named in honor of the retired head of the Department of Pediatrics, Yale Medical School, was dedicated in the presence of a large gathering of members of the staff, parents of the present and former patients, and many invited guests.

The assemblage was addressed by Leonard W. Mays, executive director, Association for the Aid of Crippled Children and Franklin M. Foote, State Commissioner of Health.

For nearly 25 years, beginning with the commission to build the training school, Dr. Powers has been a member of the commission and more than any other one person has given direction to this institution which is one of the outstanding facilities in this country for the training of the mentally retarded.

Windham County

L. G. LaPalme of Putnam was elected to the Connecticut State Medical Society advisory committee during the 168th semi-annual meeting of the Windham County Medical Association.

Bruce Valentine of Abbingdon, association president, announced the election of William A. Whalen as a member of the group. Joseph N. Perreault was honored, in absentia, with the presentation of a fifty-year award.

Speaking at the dinner meeting, which was held at the Nathan Hale Hotel, were Donald Von Weedel, New York Research Department, and Carl Anderson of Worcester, Massachusetts representing Hemphill, Noyes and Company.

A meeting of the auxiliary was held in conjunction with the program.

Council On Mental Retardation

The Council on Mental Retardation, recently appointed by Governor Ribicoff as part of the reorganized Connecticut State Department of Health met November 12th in the office of Franklin M. Foote, Commissioner of Health, in Hartford. Present was Burton Blatt (Ed.D.), Professor and Coordinator of Special Education, Southern Connecticut State College, who is chairman of the Council's Committee on Vocational Training Centers.

The Council considered whether Woodruff Hospital in New Haven might be used as a center for mentally retarded children. No conclusions were reached as it was felt that more study is needed. The advice of informed persons will be sought in this matter.

The Council feels the need for additional space due to the more than 1,050 children on the waiting list for Mansfield and Southbury Training Schools, both of which are filled to capacity. Plans were also made for procedures by which criteria will be established for grants of funds to communities to expand the operation of day care centers, diagnostic centers, and vocational training centers.

Other members of the Council are the Rev. Joseph C. Gengras, New Britain, chairman of the Council, Dr. Roswell D. Johnson, also of New Britain, Mrs. John P. Kennedy of Bridgeport; Mrs. Lenore H. Davidson of Northford; Mrs. Marjorie G. Campbell of New Canaan; and Mr. Francis E. White of Stamford.

Letters To The Editor

October 7, 1959

To the Editor:

Last week I attended a meeting of the Connecticut Health League at Storrs. The Connecticut State Medical Society is a member of this league, which is a loosely knit gathering of agencies and organizations who are interested in health in Connecticut. While there, several thoughts turned over in my mind and I believe that you might see fit to give them air, so to speak, in the Journal.

If I were writing an editorial instead of a letter to the editor, I should write under the title, Public Health, a Symphonic Analogy. It will do no harm to keep such a title in mind in this letter.

In earlier days, and still to a large extent in our small communities, public health was whatever the local physician found time to make it. The value of a well developed health department has for some time been apparent in our cities and larger towns, but our smaller towns have been almost stubbornly reluctant to group themselves in Health Districts and to accomplish together what they singly cannot afford. Under permissive legislation, the State Department of Health has had little success in developing good local health programs in these communities.

We now observe a steady migration into these towns of people who commute to the cities, but bring with them the problems of sanitary engineering for their trailer camps or ranch house clusters in the woods. They also bring with them an experience as to what a modern health department can accomplish, what school health programs should offer their children, and sooner or later these "immigrants" will demand similar services.

Recent surveys of Windham County showed a serious lack of the kind of health personnel and of organized services under discussion. There are no medical social service workers nor nutritionists. Many more visiting nurses are needed. Practicing physicians are the first to admit that they are too busy to give the necessary sanitary inspections and to do all the other things required of the local health officer and to carry on a busy practice besides. The resistance to change does not come from the physicians, but rather the community leaders, in town government, in chambers of commerce and granges. It is natural to examine carefully the teeth of this new animal, lest he bite with increased taxes.

Well, here goes for the analogy. It has to do with the position of leadership that the physician is called on to assume.

Public Health programs, to me, are like symphonic music. The public health trained physician is the conductor and the practicing physician is the first violinist. If the group is small the violinist is the leader as in chamber music. But if many different instruments are involved, a conductor is needed who knows how and when to call upon the wood winds, the brass section, the tympani or even the glockenspiel, each to add his bit to make good music. I would hesitate to suggest that the various members of the health team would be represented by the piccolo or kettle drum. Stretching the analogy that far would be unwise, but I think that the practicing physician

should be the concertmeister. He can take over in the absence of the conductor, but he has to lay aside his violin. He cannot make symphonic music even with his Stradivarius.

As for the conductor, it is rare to find a good one who has not in the course of his education mastered one or more of the instruments he now supervises. Often he has taken a hand at composing.

Dr. Norman Gardner gave an excellent keynote address. He has been for several years a prophet of rural medicine, whose voice in the wilderness has not gone unheard. In discussing the need for more practitioners of medicine in rural areas he wisely pointed out that every crossroad does not need a clinic. With good roads and dependable autos, it is sufficient to have medical services readily available. The same may be said for health officers. If properly organized, the needs of the people in small towns can be well met in a manner that is both effective and economical.

Perhaps the physicians understand this analogy as a reasonable one for their situations. I doubt if the development of Health Districts is held back by the doctors but rather those who foresee expenses for services which they have not yet come to appreciate.

The fourteen towns clustered about the Windham Community Hospital is a natural for the formation of a health district. The population is over 50,000 and the people are already drawn to their excellent hospital by the centripetal force of sickness. I hope that advantage will be taken of this circumstance to provide symphonic public health music under the leadership of an able conductor and supported by an enlightened citizenry.

Very truly yours,

JAMES RAGLAN MILLER, M.D.

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Book Reviews

A TEXTBOOK OF MEDICINE. Edited by Russell L. Cecil, M.D., and Robert F. Loeb, M.D. Tenth Edition. Philadelphia, Pa., W. B. Saunders Co., 1959, \$8.00.

Reviewed by LOUIS H. NAHUM

The latest edition of one of the standard textbooks of medicine retains its basic format and discusses disease entities in two large categories, the first consisting of etiological groupings, and the second consisting of organ systems involved. There is some overlapping, but an excellent index facilitates the finding of complete information on a given topic. Each entity is presented under the standard headings of etiology, pathological anatomy and physiology, symptomatology, physical and laboratory findings, and treatment. The choice of authors for each section is wise, and the presentations are in general of uniformly high caliber. New sections dealing with conditions which have recently come to attention or assumed importance are included, and such topics as aldosterone, the carcinoid syndrome, hepatic coma, and new concepts of sex differentiation are fully described. Useful tables of laboratory values are appended.

Two aspects of the volume make it more than just an exhaustive compendium of specific disease information, and point up two levels of integration which make the practice of internal medicine more than a simple diagnosis-therapy relation. The first of these is the inclusion at strategic points of discussions of basic physiology and biochemistry. These serve to illuminate for both student and practicing physician the scientific foundations upon which clinical medicine rests, and to furnish a sound guide for approaches to clinical problems. Of particular merit are the descriptions of fluid and electrolyte balance by Berliner and Lavietes, of steroid physiology by Jailer, of pulmonary and renal function by Richards and Taggart, and of the mechanisms of heart failure by Stead.

The second aspect consists of a foreword by Atchley concerning patient-physician communication. This deals with the ways in which communication between patient and physician is established on several levels—emotional, cultural, and intellectual. Integrity and mutual trust are emphasized, and the importance of the patient as a whole being is stressed. Dr. Atchley states, "When all the gain from good communication has been achieved and all the knowledge from textbook and technical information has been mobilized, there is a final step that is no less critical than are all the others. This is the wise and scientific integration of all the varieties of data into the biological portrait of a single human being. This is the art of medicine, and like all great art, it is the skillful and creative application of a scientific discipline to a human problem." Careful perusal of this volume will provide the reader with the clinical and technical data and the basic scientific concepts, and will indicate the communicative and integrative approach necessary to accomplish this end.

YEAR BOOK OF MEDICINE, 1959-1960 Series by Paul B. Beeson, M.D. et als, Year Book Publishers, Inc., Chicago, Illinois, 1959. \$8.00.

Reviewed by DENIS S. O'CONNOR

During the past year a former president of the American Medical Association in a public statement advocated periodic re-examinations for doctors to determine their knowledge of medical advances. The inference was that once a doctor had obtained his license to practice medicine, he did not keep up with medical knowledge. While the inference is debatable, the demands on the time and energy of most doctors by the conditions of medical practice do not leave much time for the continuing study of medicine in its many aspects and even the great volume of promotional material received by doctors from pharmaceutical companies and other sources, while educational in part, by its claims and counter-claims creates confusion in the doctor's mind. Even the articles appearing in the many medical journals cannot be accepted always at face value and require the seasoned judgment of the medical authorities.

It is for these reasons that the Year Books of Medicine, containing as they do the distillate of the medical literature and the comments of the authors who are recognized authorities in their fields serve the busy practitioner in his efforts to keep abreast with medical advances.

The present Year Book of Medicine, while too bulky for the pocket could with profit be on the desk of the doctor for his perusal during a lull in his day or to refer to when he is beset by a difficult problem in diagnosis, or treatment.

It is the rare doctor who is not interested in increasing his knowledge which suggests the thought that sections of the Year Book, of pocket size, might make it possible for the doctor to improve his knowledge in the many periods of forced inactivity in the hospital, the courts or in travel.

PREVENTIVE MEDICINE. Principles of Prevention in the Occurrence and Progression of Disease. Edited by Herman E. Hilleboe and Granville W. Larimore. Philadelphia, W. B. Saunders Co., 1959, pp. 731. \$12.00.

Review by JOHN R. PAUL

This large volume contains more than the title suggests. It really is a source book dealing with the various fields in which a modern, State Department of Health can find itself engaged, and concerning which the senior editor, as Commissioner of Health of the State of New York, is eminently qualified to describe. Many of the chapters have been written by members of his staff. The book will find a place among other texts from this well known State Department of Health and its Laboratory, which have long been regarded as "institutions" that have set certain standards of thoroughness adequate to serve as models for other departments of health.

The multifarious fields which today come within the framework of such Departments are covered by various chapters dealing with traditional subjects, such as, water supply, waste disposal and health education, but one also finds chapters on the new responsibilities for the health department,—air pollution, ionizing radiation, and medical defense against atomic attack. A Section on Periodic Health Inventories dealing with methods for determining the prevalence of those diseases which are not officially reported, is certainly timely. In particular, those chapters describing screening methods

for estimating the local frequency of heart disease should have an appeal to anyone interested in short or long term sickness surveys and their implications. In this connection it is pointed out by the editors that not only do these surveys, when properly carried out, yield some measure of frequency of a given disease but the survey idea has great use in the detection of early cases.

If a criticism is in order, the reviewer might point out that the title of the book could be misleading. Arguments continue as to what is a proper definition of *preventive medicine* and one finds comments on this in the introduction of this volume. However, at the risk of becoming involved in questions of semantics, one almost wonders whether the editors may not have started out to compile a book on Principles and Practice of Public Health, and ended up by calling it "Preventive Medicine."

CIBA FOUNDATION SYMPOSIUM ON THE REGULATION OF CELL METABOLISM. Edited by G. E. W. Wolstenholme and C. M. O'Connor. xii + 387 pp. Little, Brown and Company, Boston, Massachusetts, 1959. \$9.50.

Reviewed by JOSEPH S. FRUTON

This volume contains an extremely stimulating discussion of a central problem of biology—how is the catalytic activity of the individual enzymes of a living cell coordinated and controlled? The participants in the symposium, held in July 1958, and organized by Professor Sir Hans Krebs, included many of the leading investigators in the enzyme field. An indication of the scope and caliber of the papers presented is provided by the list of titles and authors: Rate-limiting factors in cell respiration (H. Krebs); On the meaning of intracellular structure for metabolic regulation (P. Siekevitz); Some topographical aspects of the regulation of cell metabolism (C. de Duve); Control of intracellular respiration (E. C. Slater and W. C. Hülsmann); Quantitative aspects of the control of oxygen utilization (B. Chance); Control points in phosphorylating respiration and the action of a mitochondrial respiration-releasing factor (A. L. Lehninger, C. L. Wadkins, and L. F. Remmert); Some problems in the choice of oxidative pathways of carbohydrate metabolism (F. Dickens, G. E. Glock, and P. McLean); Recent observations on the mechanism of glycogen synthesis in muscle (P. W. Robbins and F. Lipmann); Alternative pathways of electron transport (C. Martius); Limiting factors in glycolysis of ascites tumor cells and the Pasteur effect (E. Racker and R. Wu); Role of triphosphopyridine nucleotide in the regulation of glycolysis in a cell-free preparation (V. R. Potter and H. Niemeyer); Phosphate turnover and Pasteur effect (F. Lynen, G. Hartmann, K. F. Netter, and A. Schuegraf); Enzymic regulation of fermentation in yeast cells (H. Holzer); Mechanisms for control of enzyme synthesis and enzyme activity in bacteria (A. B. Pardee); Automatic adjustment mechanisms in bacterial cells (A. C. R. Dean and C. Hinshelwood); Regulation of growth and composition of the bac-

terial cell (B. Magasanik, A. K. Magasanik, and F. C. Neidhardt). As is customary in the volumes based on the Ciba Symposia, each article is followed by a report of the lively discussion which it stimulated.

This book is highly recommended to all those interested in obtaining a clearer picture of recent efforts to bridge the gap between our knowledge of individual enzymes and of the metabolism of intact cells. Although the symposium may have raised more questions than it answered, its publication cannot fail to stimulate thought and research in this challenging field.

The Doctor's Office

Donald E. Cook, M.D., announces the opening of an office for the practice of general medicine in association with Dr. G. Robert Saunders and Dr. John R. Egan at Boston Post Road, Old Saybrook.

Robert S. Grossman, M.D., announces the opening of an office for the practice of surgery at 18 Main Street, Newtown.

William F. Hughes announces the opening of an office for the practice of general surgery at 266 State Street, East Westport.

Marie C. Kernan, M.D., announces the opening of an office for the practice of general surgery at 13 East Main Street, Jewett City.

Robert L. Lombardo, M.D., announces the opening of an office for the practice of internal medicine at Trails Corner, Groton.

Richard M. McGuane announces the opening of an office for the practice of pediatrics at 82 South Road, Thompsonville.

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Obituaries

Charles A. Breck, M. D.
1904 - 1959



Charles A. Breck died on October 1st.

Dr. Breck was born in Ada, Ohio, November 13, 1904, and was a graduate of Ohio Northern University. He received his medical degree from Yale Medical School in 1930 and, following his internship, started practice in Wallingford in 1932.

Of strong character, and a personality which inspired confidence he rapidly became the leading physician in this community, and was known for his untiring efforts for his patients. On the go, day and night, he not only concerned himself with the medical needs of his patients, but also with their total personality and worries. Long before the days of psychosomatic medicine he was practicing it to such an extent that he was deeply needed by many in Wallingford.

In 1942 he was commissioned a Major in the Army Medical Corps and joined the Yale Unit which became the 39th General Hospital and formed at Camp Edwards, Massachusetts.

He was retired as a Lieutenant Colonel in 1945.

He re-entered private practice in 1946 and in spite of rheumatoid arthritis, a fractured hip, cholecystectomy, cortisone therapy, vertebral compression fractures, osteoporosis, massive G.I. tract hemorrhage, severe intractable anemia, achalasia of the esophagus, he continued his practice until November, 1956 when he retired due to ill health.

He is survived by his wife the former Alicia Hadfield and two daughters, Mary and Susan.

He will be missed by all of us.

KURT S. PELZ, M.D.

Leon Irving Madden, M.D.
1883 - 1959



Dr. Leon Irving Madden, retired general practitioner in Hartford for 39 years, died at the home of his daughter in Haverhill, New Hampshire September 19th.

Born March 26, 1883, in Agawan, Mass., Dr. Madden graduated from West Springfield High School in 1902, Clark University in Worcester, Massachusetts in 1905, and Harvard Medical School in 1910.

After serving his internship at the Hartford Hospital, Dr. Madden married Elsie Crosier of West Springfield, Massachusetts in 1912 and immediately started practice in Hartford where he was associated with the late Dr. A. E. Abrams for about 10 years.

He was a member of Immanuel Congregational Church, where he served as a deacon for many years.

Retiring from an extremely active practice in 1951 because of his health, he moved to Avon where he joined the West Avon Congregational Church.

He was a member of the Hartford Medical Society, Hartford County Medical Society, Connecticut State Medical Society, the A.M.A. and a member of St. John's Lodge No. 4 A.F. and A.M. of Hartford.

Besides his wife, he is survived by two daughters, Mrs. Rufus Ansley of Haverhill, New Hampshire and Mrs. Donald Beebe of West Granby; a sister, Mrs. Edith Howley of Agawan, Massachusetts; and three grandchildren.

His love of his chosen profession and intense interest in his work endeared him to all in his large following.

BERTRAND F. RANKIN, M.D.

Andrew M. McQueeney, M.D.
1882 - 1959



"And the pleasure of the Lord shall prosper in his hand."

Isaiah, LIII. 10.

On September 20th, 1959 Dr. Andrew McQueeney passed away suddenly of an acute coronary occlusion at the age of 77 years.

No detailed biographical recitation will follow him here: long since begun, so long enduring esteem and friendship cannot at the open grave yield to a merely historical assignment.

More than 30 years ago a patient of his had kept essential information from him and was later diagnosed at my fledgling hands. He was sent back to the then already leading surgeon with a modest explanatory note. Insisting on the man's remaining under my care, Dr. McQueeney asked to meet me and reacted with exemplary fairness towards the novice in the profession. It was that impersonal sense of impartiality, that objectivity at the bedside and at the operating table that never ceased to arouse profound respect for him on the part of all who knew him.

Dr. McQueeney's patients came by the hundreds from all parts, and one nearly always heard nothing but praise about him. His great surgical skill was, of course, well known not only among his patients but in the profession at large. For many decades he daily met heavy demands upon him, and he faced challenging situations in the operating room with dignity, courage, and equanimity. In most instances, while operating, he also took pains as a teacher to give of his knowledge and experience to those about him, assistants and nurses alike. In doing so, he unostentatiously revealed unusual competence in

the fields of anatomy and embryology whenever they had a bearing on the surgical problem before him. At all times, his versatility far beyond the scope of surgery would astound his colleagues. It was clear to all that Dr. McQueeney was not only a brilliant surgeon but also a clinician of rare diagnostic ability intimately acquainted with the progress of medicine in many areas which are not of direct concern to the average surgeon. It was heartwarming to hear his unprepared, informative remarks at staff meetings on most recent investigations in such subjects as applied biochemistry, metabolism, and electrolytes. On other occasions, his ken would branch out into disciplines only remotely related to medicine, such as botany. And his innate wisdom kept pace with his broad erudition for the benefit of the sick and for the enlightenment of generations of physicians.

With an enormous burden and work-load on his shoulders, his jolly humor and sparkling wit were most pleasant overtones of good fellowship in a personality which precluded aloofness, inaccessibility and forbidding austerity. His sober and forever agile mind, his intellectual height, his grave responsibilities, his amazing range of interests did not stop him from cordially and freely sharing with others the blessings which Providence bestowed upon him.

During the formative years of Saint Vincent's Hospital in Bridgeport, his enviable prestige, his devoted and untiring efforts were largely responsible for establishing and maintaining one of the finest departments of surgery in the State of Connecticut. With clarity of noble purpose, with prudence and foresight, he continued to help steering the destiny of the institution and finally became its first Director of the Department of Surgery in 1950, having, in two scores of years gone by, fully achieved well merited fame and distinction.

The last few years of Dr. McQueeney's life were burdened with grave and debilitating illness. For a patient aware of his gloomy outlook, he remained cheerful and coöperative to the last, submitting to treatment and care with keen interest in, and scientific understanding of, the medical agents employed. The humanist and classicist did not surrender to suffering and despair.

In the end, with a swift stroke of grim finality, bleak death has torn him away from our midst. Yet, in a greater sense, he did not die. For, in the hearts of thousands whose lives he has saved, in the minds of his many faithful friends, in the thoughts of all who cherished warm affection for him, he will go on living. For, in the words of the ancient prophet, the pleasure of the Lord has prospered in his hands.

MARCUS BACKER, M.D.

Sanford H. Wadhams, M.D.

1874 - 1959

General Sanford H. Wadhams was born in Torrington March 20, 1874, son of Fred L. and Sarah Goodwin Wadhams. He was graduated from Yale College in 1894 with a Ph.B. degree, and from the Yale Medical School in 1896. He interned in New Haven.

He was a veteran of both the Spanish-American war and World War I. He served in Panama during construction of the canal.

He entered military service in the Spanish-American War September 3, 1893, as acting assistant surgeon and was assigned to Camp Wykoff, L. I. In October of that year he was transferred to Puerto Rico and commissioned first lieutenant and assistant surgeon. Advanced to surgeon in December, 1900, he was assigned to Columbus Barracks, Ohio. He was ordered to Manilla, P. I. in July, 1902, and served at Zamboanga, Cebu, Camp Jossiman and Manilla. In 1905 he returned to the United States and was commissioned a captain in that year.

Prior to service in World War I, General Wadhams served at Fort Slocum, N. Y., in 1905; in Hawaii, from 1910 to 1912; at Fort Porter from 1912 to 1914, and was on duty with the New York National Guard from 1914 to 1916, as inspector-instructor.

In October of the latter year he was ordered to Paris, France as a member of a military mission accredited to the French Army and for special duty at the American Embassy, Paris. In June of 1917 he was attached to the headquarters staff of Gen. Pershing, serving in the office of the chief surgeon, in charge of hospitalization program.

In March, 1918, General Wadhams, who then held rank of colonel was designated deputy chief surgeon at general headquarters, A.E.F. In May of that year he was detailed as a member G.S., general headquarters, and charged with all hospitalization and evacuation in the zone of the armies. He returned to the United States in June, 1919, and was assigned to duty as instructor, general staff college, Washington, D. C., until his retirement on July 16, 1921, with the rank of brigadier-general.

His service with the State of Connecticut began in 1926. He was appointed director of the State Water Commission and was reappointed by Governor Wilbur Cross in 1931 and 1937. In September, 1953, he was a signer of the Connecticut River Flood Control Pact in Vermont.

General Wadhams was a member of the American

Legion and the Veterans of Foreign Wars; was president of the F. L. Wadhams' Sons; was a member emeritus of the board of Trustees of Center Congregational Church; and served on the boards of the Institute of Living, Hartford; Torrington Water Co.; Hillside Cemetery Association and the Inter-Governmental Cooperation Commission. He was a corporator of Charlotte Hungerford Hospital, and a member of the board of directors of the Hospital.

I. S. GOLDBERG, M.D.

In Memoriam

Brecker, F. Wellington—West Hartford; Tufts Medical School, 1928; practiced in East Hartford since 1929 and served at one time as health director of that community and as a member of the Board of Finance; he was a diplomate of the American Academy of Dermatology and specialized for a time at the New York Skin and Cancer Center and the Boston City Hospital; died November 9 at St. Francis Hospital, Hartford, aged 58, after collapsing while visiting a patient there.

Curran, Harold J.—Waterbury; Tufts Medical School, 1924; Dr. Curran was a practicing surgeon in Waterbury for 20 years; prior to that, he practiced for 15 years in Thomaston; served as surgeon at Scovill's Industrial Hospital and was a Fellow of the American College of Surgeons; died November 4 at Waterbury Hospital, aged 59, following a long illness.

Hanley, John P.—Stafford Springs; Cornell Medical School, 1906; Dr. Hanley was a native of Stafford Springs; he was a member of the Johnson Memorial Hospital staff since the institution was established in 1912, and chief of staff when he retired; past president of the Connecticut State Medical Society, and honored as a 50 year member of the Society one year ago; dean of Tolland County physicians when he retired two years ago; died in Johnson Memorial Hospital, November 2, aged 77 years.

Lenoci, Ralph P.—Bridgeport; Hahnemann Medical College, 1940; a member of the medical staff at Bridgeport Hospital; served as a flight surgeon with the Eighth Air Force during World War II; active in sports, he was a star baseball player at Warren Harding High School in 1930 and 1931; he was an alumnus of Fordham University; died October 19 from a heart ailment at St. Vincent's Hospital, Bridgeport, aged 45.

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Special Notices

GRIFFIN HOSPITAL APPOINTMENTS

The following is a list of appointments to the medical staff of The Griffin Hospital during the past year.

September, 1958—Cecilia A. Narowski, M.D., Pediatrician.
Office: 17 Elizabeth Street, Derby.

January, 1959—Philip D. Henry, M.D., Surgeon. Office: 59 Elizabeth Street, Derby.

July, 1959—Valentine J. Deduk, M.D., Surgeon. Office: 135 Main Street, Seymour.

July, 1959—Buel K. Grow, Jr., M.D., Psychiatrist. Director, Psychiatric Clinic, Griffin Hospital. Office: 314 Elizabeth Street, Derby.

September, 1959—Wilbur P. McNulty, Jr., M.D., Pathologist and Director of Laboratories, Griffin Hospital.

October, 1959—Horst N. Bertram, M.D., Associate Radiologist, The Griffin Hospital.

October, 1959—James D. Garity, M.D., General Practitioner. Office: 119 Main Street, Seymour.

Symposium on Problems of Graduate and Postgraduate Education in the Community Hospital

Sponsored by

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The Connecticut State Medical Society
Yale University School of Medicine

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Yale-New Haven Medical Center

Wednesday, January 13, 1960
2:00 to 5:00 P.M.

Introduction—Arthur Ebbert, Jr., M.D.,
Assistant Dean, Yale School of Medicine

Panel

Moderator—John C. Leonard, M.D.,
Director of Medical Education, Hartford Hospital

“Objectives of the Hospital Educational Program”—Walter S. Wiggins, M.D., Secretary, Council on Medical Education and Hospitals, American Medical Association.

“The Foreign Graduate Intern and Resident”—Dean F. Smiley, M.D., Executive Director, Educational Council for Foreign Medical Graduates.

“Continuation Education for the Practicing Physician”—Leland S. McKittrick, M.D., Chairman, Council on Medical Education and Hospitals, American Medical Association.

“Financing the Hospital Educational Program”—Charles V. Wynne, Administrator, Waterbury Hospital, and Past President, Connecticut Hospital Association.

DISCUSSION AND QUESTION-ANSWER PERIOD

This program has been designed especially for directors of medical education, chiefs of staff, members of hospital educational committees, hospital administrators, and trustees. All interested physicians are invited to attend.

Advanced registration is not required. There will be no registration fee.

The entrance to Brady Auditorium is at 310 Cedar Street. Inquiries may be directed to the Office of the Assistant Dean, Postgraduate Medical Education, Yale University School of Medicine, 333 Cedar Street, New Haven 11, Connecticut.

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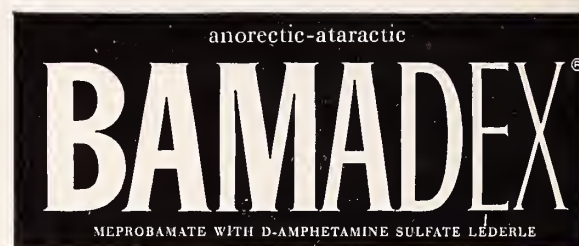
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Oral Polio Vaccine Safety Questioned

The risks of oral polio vaccine "appear to be greater than had been suspected" and much more knowledge must be obtained before it can be considered safe, three Baylor University researchers stated.

Vaccines made from live polio viruses reduced in strength are now being given by mouth to thousands of children all over the world, under the direction of Dr. Albert Sabin, University of Cincinnati, developer of the vaccine.

The researchers, Joseph L. Melnick, Ph.D., Matilda Benyesh-Melnick, M.D., and James C. Brennan, M.D., said, "If caution was called for in 1954 and 1955 when the Salk vaccine was introduced into large-scale field use, then caution should also be the watchword now."

Writing in the current *Journal of the American Medical Association*, they said the safety of the vaccine has not been definitely proved.

Safety tests performed in a number of different laboratories are in "serious disagreement" about the degree of attenuation (reduction in strength) of the viruses, the authors said.

"We do not imply," they continued, "that we have proved that such virus strains are dangerous either for the vaccinated child or for the community, but we wish to emphasize that the risks appear to be greater than had been suspected and that much more knowledge must be obtained . . . before the available attenuated strains can be said to meet the criteria of a safe and effective vaccine. . . ."

They also pointed out that a study among Mexican children showed many who were free of polio antibody (the blood agent that fights infection) but who failed to develop antibodies when given the vaccine. This apparently occurred because they were already infected with a nonpolio enterovirus (one that lives in the gastrointestinal tract) and this infection blocked the implantation of the polio virus.

Such interference might well limit the effectiveness of an orally given vaccine in areas where enterovirus infections are common, the researchers said.

State Welfare Drug Costs

Since 1954 the State Welfare Department's expenditures for prescribed drugs have more than tripled, presently averaging something over \$3,750 per day. During the past five years the number of beneficiaries has increased only moderately—about 16 per cent—while the number of prescriptions, drugs prescribed, and cost of individual items have mounted steadily to a new and unrealistic high. . . .

Earnest attention is once more directed to the following regulations, all of which have been approved by the Medical Society's Advisory Committee and issued to practitioners during the past several years:

"The State Welfare Department cannot pay for—

1) high priced drugs, when therapeutically equivalent preparations are available at lower prices;

2) trade-name preparations, when therapeutic equivalents are available under USP or generic names at lower prices;

3) specially packaged drugs (syringe pack, etc.) when standard packages are available at lower prices;

4) injectable preparations, when equally effective oral preparations are available at lower prices;

5) sera, vaccines and other immunizing agents, so long as these are available from the State Health Department through local Directors of Health, without charge, for the use of the State's indigent;

6) drugs prescribed for the treatment of obesity;

7) antibiotics when prescribed for the common cold, influenza, or other diseases generally known to be unaffected by them;

8) over the counter and "medicine chest" items.

Compliance with these very necessary regulations for the control of tax money can cut welfare drug costs, it is estimated, in half.

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How Accurate Is Laboratory Work?

Even among mathematically minded physicians there is a deep seated conviction that accuracy is unlimited. If only the Technician were more careful she could reproduce results *exactly*.

TRY YOURSELF

To prove that even simple measurements are not reproducible, try measuring the height of a patient without looking at the scale until after the cross-bar is adjusted to your satisfaction. Take reading, move the bar, and try again. Keep duplicate readings on 10 patients. Such factors as the size of scale graduations, tilt of the cross-piece, stiffness of the hair, posture, etc., will prevent complete accuracy. In fact when we tried it, using the scale in the Hospital Clinic, our SD was .28 inch, and 3 SD was .84 inch!

MEANING OF SD

Using 10 pairs of measurements as above and calculating by a simple formula popularized by Dr. Bradley Copeland of Boston, one can calculate the Standard Deviation (SD) of any procedure involving quantitation. 3 Standard Deviations (3 SD) will include 99.7% of all duplicate measurements made by the technique under study. Put another way, if measurements made at one time differ from those made at another time by 3 SD, the changes are 997 out of 1000 that a real change has occurred.

EXAMPLES

1. A patient's Hemoglobin is 11.5 Grams on February 1 and 10.2 Grams on February 2. Is this significant of bleeding or hemodilution or is this a result of variability due to the method? We consult a 3 SD Table already prepared by testing and find the 3 SD value for Hemoglobin is ± 0.57 Gm.

Observed difference $11.5 - 10.2 = 1.30$ Gm.

3 SD $= 0.57$ Gm.

Result is significant.

2. A patient is 64 inches high on January 1 and 63½ inches high on February 1. Is he shrinking?

Observed difference $64 - 63\frac{1}{2} = .5$ inch

3 SD $= .84$ inch

Interpretation: This is within the limits of error of the measurement and does not indicate that he is shrinking.

WHAT THE METHOD WILL NOT DO

1. *It will not prevent or detect gross laboratory errors.* Such mistakes as taking blood from the wrong patient, omitting a step in procedure, or making a mathematical blunder in calculation can give results well outside the 3 SD limit yet of no real significance. Despite every precaution such errors occur; fortunately they are very rare. By his clinical acumen the attending physician will often detect such errors and repeat the test.

2. *It does not help relate the results in a given patient to a theoretical normal.* For example a platelet count method gives excellent reproducible values from day to day in single patients. However the "normal" varies from about 150,000 to about 350,00/cu. mm. In platelet counts therefore only a very low figure, under 100,000, would suggest true thrombocytopenia; but a day to day change of perhaps 20,000 would be significant of response to treatment.

"QUALITY CONTROL"

This type of mathematical formulation is now being widely adopted in clinical laboratories for following the accuracy of performance. In brief, a 3 SD value is established for every quantitative test using a standard solution simulating the test substance. This is run in duplicate under ordinary laboratory conditions by a good technician. Once the range is established duplicate analyses of the same standard are run with each batch of unknowns. If the test is "in control", the results can be used with confidence; if they are "out of control", the cause of the error must be established and new analyses undertaken. The College of American Pathologists anticipates that such a program will be under way in all acceptable clinical laboratories within the year.

Optimum Times For Nasal Deviation Correct

Nose surgery before a child is 14 should be kept to an absolute minimum, according to two Eastern otolaryngologists.

Surgery to correct nasal deviations should be delayed whenever possible until the nose has reached its full growth between the ages of 14 and 17, the doctors said in the current Archives of Otolaryngology, published by the American Medical Association.

Surgery in the early years may interfere with the nose's growth and result in further deviation. Surgery should be performed only in situations where the deviation interferes with the passage of air.

The doctors also reported a new operation for repairing the bone that divides the nose into two chambers. It is better, they said, to make several small vertical incisions near any buckled area of cartilage than to make one long incision.

This is recommended so that only a minimum of cartilage will be removed and that only a minimum of interference with the nutrition of the remaining cartilage will occur.

The authors are Dr. Joseph G. Gilbert, Roslyn Heights, N. Y., and Dr. Samuel Segal, Jr., Springfield, Mass.

Cancer Study Of 85 Drugs Begun In '59

Eighty-five new cancer drugs have begun to pour into clinical research centers for trial during 1959 in the first large dividend of the national cancer chemotherapy screening program.

A new report on the effectiveness of adjuvant chemotherapy in cancer—administration of nitrogen mustard after surgery in 40 patients with breast cancer—is “encouraging, though not yet conclusive,” according to Dr. Warren Cole, of the University of Chicago.

Recurrences and deaths in a 40-patient control group treated with surgery alone have so far been twice those among 40 women treated with surgery plus chemotherapy.

These were among reports made to science writers at a seven-day American Cancer Society seminar on cancer progress in Excelsior Springs, Missouri.

Dr. Cole called the therapeutic results among his patients with breast cancer the most striking in his center's 3½-year adjuvant chemotherapy study. His group is now among those at 112 centers and 20 VA hospitals evaluating adjuvant chemotherapy.

THE START OF “A FLOOD”

The compounds now in trial or approaching trial are only the beginning of what should be a continued flood of new agents, indicated a panel composed of Drs. Sidney Farber, Boston, chairman of the Cancer Chemotherapy National Committee; Stewart Sessoms, chief of the Cancer Chemotherapy National Service Center, Bethesda, Md.; I. S. Ravdin, Philadelphia; Chester Stock, New York; and Ralph Jones, Miami, Fla.

Of the 30 new drugs that became available for trial in 1958, they said, “five or six” still remain in trial. Some 20 cancer compounds in all are now in the hands of practicing physicians, “but we are sure,” the panelists agreed, “that this program will give us some new ones.”

Two of what they called “the most interesting new drugs” are German synthetic alkylating agents. The “most interesting” thing about these drugs and others coming up is “their wide spread between therapeutic action and toxicity,” said Dr. Jones. Altogether, he said, the new agents include 50 hormones, 16 new alkylating agents, 10 antimetabolites, five antibiotics, and four “totally new synthetics with structures not known before to have activity against cancer.”

Dr. E. Donnell Thomas—physician-in-chief, Mary Imogene Bassett Hospital, Cooperstown, N. Y.—on December 15 gave an ordinarily lethal total-body radiation dose of 800 roentgens from twin cobalt⁶⁰ sources to a four-year-old girl in progressive relapse from acute leukemia. He followed this with intravenous infusion of marrow cells from an identical twin. The girl is now clinically and hematologically well after three and a half months.

TRIED ON FIVE PATIENTS

Working with a group from Columbia University, he has so far given this dose to five patients, three of whom are still alive. “Several others,” he said, “are now receiving doses of 800-1,100 roentgens. . . . They are getting their own marrow whenever possible—it is stored during remissions and frozen—otherwise they are getting homologous marrow.”

Much work remains to be done, he said, but already “it is evident that successful transplantation of autologous marrow has been achieved in man. Further, it is evident that marrow recovery can be induced after radiation doses large enough to be effective in the control of a variety of disseminated malignant diseases.”

Twenty years' experience with supervoltage roentgen therapy (between 600 kv. and 3 mev) has shown it to be “indispensable” in cancer treatment, said Dr. Franz Buschke, of the University of California, San Francisco. “I would consider it essential in about 70 to 80 per cent of patients with cancers amenable to irradiation,” he said. “In a considerable but unspecified number of instances, medium-volt therapy should today be considered objectionable.”

It is true, he said, that statistical proof is not available because numbers involved are not large enough for significance. Also, he maintained, “the biological characteristics of the disease and the competence and skill of the therapist are more important than the equipment used.”

He called supervolt therapy “most indispensable in treatment of head and neck lesions, because of reduced bone absorption and the possibility of increasing the dose to the regional lymphatic area by single-field techniques.” In addition, he said, “the better constitutional tolerance” permits palliative treatment in certain cases where medium-volt irradiation would have greater morbidity.

Ravdin Reports On Current Treatment Of Burns

The many ointments recommended for the treatment of major burns are "of little practical value," according to Dr. Isador S. Ravdin, Philadelphia surgeon.

In a report prepared for the American Medical Association's Council on Drugs, Dr. Ravdin said, "In fact, many of the agents which have been used to promote healing have been shown to be detrimental to epithelization [skin growth]."

"The only worthwhile place for a specialized burn ointment (if such an ointment exists) seems to be on a small superficial burn for the immediate relief of pain," he continued.

The best dressing for a serious burn is "still a fine-mesh gauze lightly impregnated with an innocuous bland ointment," he said. However, the "open method of treatment," in which no dressing is used and the dried skin serves as the bandage, is gaining more and more acceptance.

Dr. Ravdin's report on the current status of the treatment of burns appears in the current A.M.A. Journal.

He pointed out that antibiotics have little value in the local care of the burned wound; however, the general use of them to prevent overwhelming systemic infection is of great value. One of the

most frequent causes of death in serious burns is from a late-developing general infection.

The use of cortisone and corticotropin has been discontinued almost entirely, he said, since they have been proved to be of no use in speeding healing.

The best method of cleaning the burned area, if this is necessary, is still by washing with surgical soap and sterile water or a salt solution. The best way to remove foreign material and dead skin is still achieved by time or the surgeon's scalpel, he said. One of the most difficult problems in serious burns is the treatment of shock. This is handled by the giving of fluids—plasma, whole blood, water or salt solutions, usually intravenously.

Large quantities of salt are necessary in the early phase of treatment because of the rapid loss of sodium by the body. If the salt solution can be given orally, a weaker solution not only is better tolerated but also eliminates the necessity of giving extra water intravenously.

Local agents to control pain are no longer used. Gentleness in the care of the patient and early removal of dead skin, with early grafting of new skin, provide the best means of making the patient comfortable, he concluded.

Dr. Ravdin is professor of surgery at the Hospital of the University of Pennsylvania.

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